REPORT SUPPORTING ENDORSEMENT AS A LOW-IMPACT HYDROELECTRIC POWER FACILITY

ISLAND PARK HYDROELECTRIC PROJECT

(FERC NO. 2973)

Prepared for:

Fall River Rural Electric Cooperative, Inc
Ashton, Idaho

Prepared by:

Kleinschmidt

Pittsfield, Maine
www.KleinschmidtGroup.com

December 2016

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FALL RIVER RURAL ELECTRIC COOPERATIVE, INC

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FALL RIVER RURAL ELECTRIC
COOPERATIVE, INC.
1150 North 3400 East
Ashton, ID 83420

October 11, 2016

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

RE: LIHI Application for Certification
Island Park Hydroelectric Project
FERC No. P-2973

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

208-652-7431 • 800-632-5726
208-652-7825 fax
www.fallriverelectric.com

FALL RIVER
RURAL ELECTRIC COOPERATIVE

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FALL RIVER RURAL ELECTRIC COOPERATIVE, INC

1.0 INTRODUCTION

The Island Park Hydroelectric Project is owned and operated by the Fall River Rural Electric Cooperative, Inc (FRREC). This report is submitted as documentation that the Island Park Hydroelectric Project (FERC No. 2973) 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 Island Park Project.

1.1 BACKGROUND INFORMATION

1. The name of the facility is the Island Park Hydroelectric Project (FERC No. 2973).
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 Island Park Project is located at a dam and reservoir owned by the United States Bureau of Reclamation (USBR) and operated by the Fremont-Madison Irrigation District. It is located on Henry's Fork of the Snake River at approximately river mile (RM) 91, 0.4 miles upstream of its confluence with the Buffalo River, and approximately 40 miles north of Ashton in Fremont County, Idaho. The Project is located within the Targhee National Forest where the non-project reservoir covers 7,794 acres with a river drainage area of 481 square miles. The Island Park Project is located downstream of the Henry's Lake outlet dam at the head of Henry's Fork and upstream of the Ashton Hydroelectric Project (FERC Project No. 2381) at RM 45, Chester Diversion Dam Hydroelectric Project (FERC Project No. 11879) at RM 38.5, and St. Anthony Hydroelectric Project (FERC Project No. 2381) at RM 32. The Island Park Project is also located adjacent to the Buffalo River Hydroelectric Project (FERC Project No. 1413) located on the Buffalo River, just 200 meters upstream of its confluence with the Henry's Fork. The

approximate location of the Project is Latitude: 44° 25’07.97”N by Longitude: 111°23’47.56”W (Photo 1-1; Figure 1-1).

PHOTO 1-1 ISLAND PARK DAM FACILITY

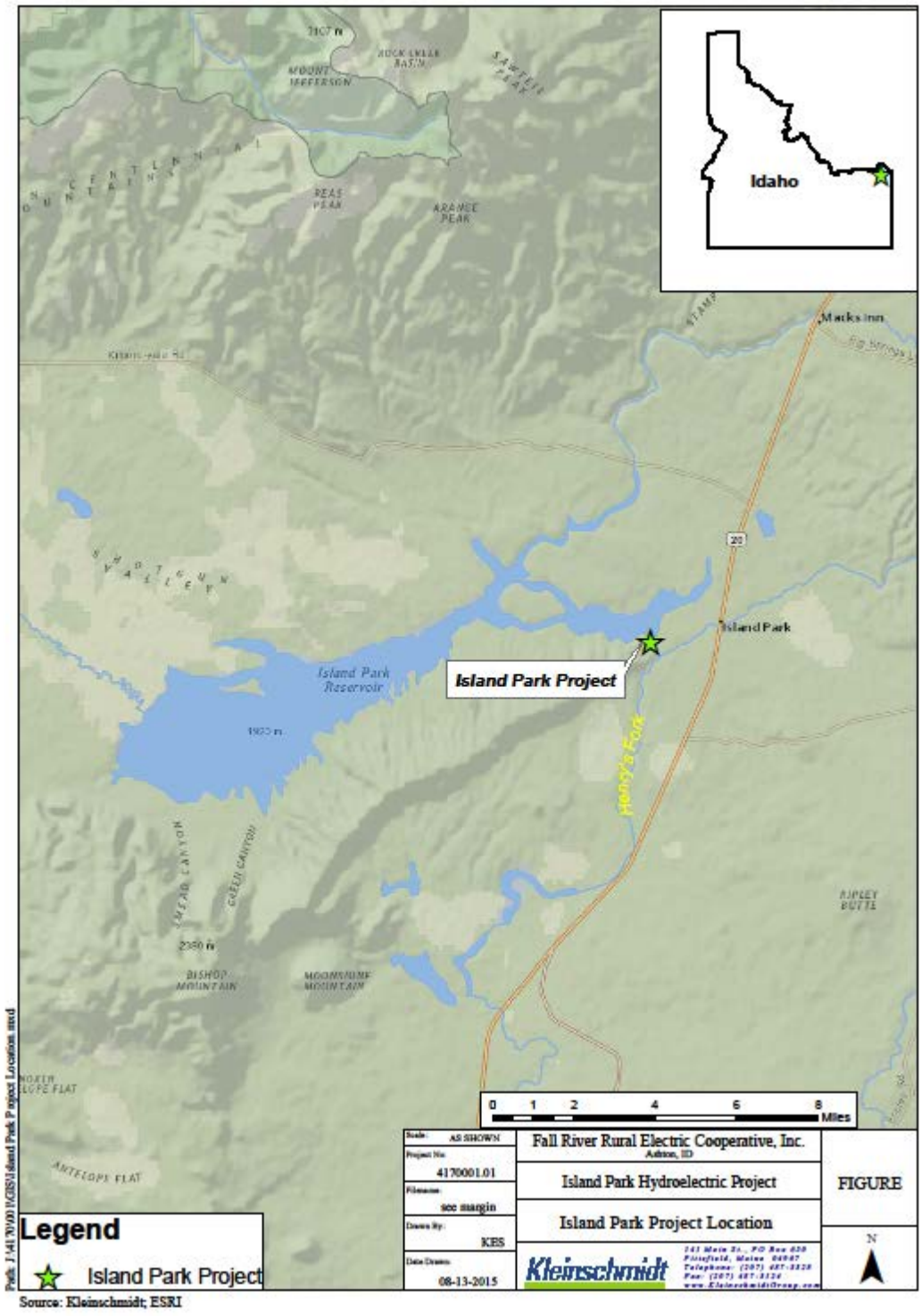

FIGURE 1-1 PROJECT LOCATION

4. The Project was constructed between September 1992 and July 1994 with an installed capacity of 4,800 kW.
5. The Project's average annual generation output from 2009-2014 was 19,437,346 kWh.
6. The Island Park Project (FERC No. 2973) is operated under a license issued by the Federal Energy Regulatory Commission (FERC or Commission) on October 19, 1988 (Appendix A). The license was issued for a period of 50 years and will expire on September 30, 2038. License amendments were issued on September 23, 1992 (available on microfilm only), August 2, 1995, February 6, 1997, April 17, 2003 (Appendix A). The Project also operates under a U.S. Forest Service (USFS) Special Use Permit issued on April 23, 1992 (available on microfilm at FERC). The Project receives a yearly review for compliance with the USFS Special Use Permit. The 2014 review and approval of Project compliance with the Special Use Permit is included in Appendix A.

   On November 25, 1996 FERC concluded that the Licensee operated in violation of 1988 License Article 403 as 30 flow changes exceeding the 50 cfs per half hour requirement were reported in the 1995 Ramping Rate Report. These violations have been included in the Project's compliance history but no penalties or enforcements were recommended (Appendix A). The Licensee worked with resource Agencies and the FERC to develop an amended License Article 403 (February 6, 1997) so that the Licensee would be able to successfully operate in compliance with the Project License.

   On December 11, 2001, the Low Impact Hydropower Institute (LIHI) determined that flows, in accordance with the Project's LIHI Certification, were violated in fall 2001 (http://www.lowimpacthydro.org/assets/files/lihi-cert-app-files/ipreport.pdf). As per the LIHI Certification issued June 7, 2001, the flow released from the Island Park Facility must meet a daily mean of 146 cfs from October - March and 292 cfs from April – September. Due to low levels within the Island Park Reservoir, because of drought conditions and the U.S. Bureau of Reclamation's need to refill the Island Park Reservoir by spring for irrigation withdrawals, the flow at the Project was reduced to 150 cfs shortly after September 17, and was further reduced to 80 cfs after October 23. LIHI certification for the Project was therefore suspended in 2001 due to a violation of the Certification's flow standard.

   As stated within a December 22, 2016 email from IDEQ (Appendix D), "The Island Park Hydroelectric plant is operated as a "run-of-river" facility. Although power-plant constraints are considered in DMP [Drought Management Plan] decisions, the plant has little influence on streamflow, which is determined primarily by irrigation storage and delivery needs, with attention given to winter-flow needs for the fishery and to power-plant constraints and capacity, when possible."

   The following includes a summary of dialogue FRREC has had with FERC concerning ramping rate flows at the Project:

   - Within the 2010 Annual Ramping Rate Report, it was noted that three flow changes exceeded the Project's ramping rate requirements. The data indicates that the flow change requirement was exceeded by a maximum of approximately 105 cfs during two half hour periods on May 7, 2010. The incident was due likely to a probe error as no change in flow was observed by the operator. The other two

flow change exceedances were a result of operator error in calculating the correct positioning of the turbine wicket gates. Data for these two incidents indicate that the flow change requirement was exceeded by a maximum of approximately 29 cfs for one half hour period on August 21, 2010, and by a maximum of approximately 25 cfs during three half hour periods on September 1, 2010. In order to prevent this type of incident from happening again, FRREC has implemented a change in the calculation of flow change goals and has provided additional operator training. Within FERC's letter dated June 9, 2011 (http://elibrary.ferc.gov:0/idmws/file_list.asp?document_id=13927177), it was determined that these temporary deviations from the ramping rate requirements are not considered violations of Article 403.

- Within the 2011 Annual Ramping Rate Report, it was noted that on April 30, 2011, during the transition of flows from one unit to two units, there was a fluctuation in the overall flow. This flow was quickly realized and compensated for by the Project operator. Based on FERC's review of the provided information, it was determined in FERC's letter dated April 12, 2012 (http://elibrary.ferc.gov:0/idmws/file_list.asp?document_id=14022680) that the deviation from the ramping rate requirement occurring on April 30, 2011, was of short duration and not be a considered a license violation. The Project operator took immediate action to rectify the deviation and no impact to environmental or recreational resources were noted.

- Within the 2012 Ramping Rate Report, it was noted that one exceedance of an up-ramp of 30.5 cfs (80.5-50 cfs) occurred on September 12, 2012, as a result of equipment malfunction. The flow change began at 9:00 am and was finished at 1:00 PM. During this flow change, the levels were not registered in the recorded data, and were manually inspected in 15-minute intervals to ensure compliance with the level changes. The operator found a connection error from the probe that controls the ramping limits. At about 1:45 pm, the operator corrected the connection error from the probe, and the final flow was shown in its entirety. Within the Annual Report FRREC stated that the current ramping rate monitoring plan and current operating procedures at the Project are helping to ensure that the required ramping rates are being adequately monitored and maintained. Therefore, no changes were made to the ramping rates or monitoring plan. Within FERC's letter dated March 11, 2013 (http://elibrary.ferc.gov:0/idmws/file_list.asp?document_id=14096596), it was determined that the deviation from the ramping rate requirement was a result of equipment malfunction, and is not considered a violation of License Article 403.

- On December 1, 2014 FRREC informed the Commission of two incidents of non-conformance that occurred beyond the control of the operating personnel and the Licensee (http://elibrary.ferc.gov:0/idmws/file_list.asp?document_id=14276135). On Wednesday November 26, 2014 at approximately 6:58 am the Project tripped off line due to a ground fault on the underground distribution line between the Project and FRREC's substation located several miles from the Project. This utility outage left the Project without station service and completely in the dark.

Due to the loss of station service the automated flow control system did not function properly and during Project shutdown the system failed to transfer flows from the powerhouse to the low level outlet gates. One quarter of the river immediately downstream of the Project was dewatered. Operating personnel immediately responded to the outage and re-established river flows from the gate house by approximately 8:40 am and station service was restored to the powerhouse at approximately 9:45 am. In conjunction with repairs to the underground distribution line, FRREC replaced the DC system located in the powerhouse and tested for proper operation. In a letter dated January 22, 2015 (http://elibrary.ferc.gov:0/idmws/file_list.asp?document_id=14293747), the Commission concluded that the incident is not classified as a violation of Article 403 as the event was caused by natural factors, FRREC responded to the situation immediately, and completed installation of the Project's DC battery backup system.

On November 28, 2014 at approximately 10:33 pm the Project's control system had inadvertently opened the low level gate to the full open position resulting in high river flows downstream of the Project. River flows were rapidly increased to approximately 1,550 cfs. Operating personnel manually closed the low level gate and returned river flows to the designated flows of approximately 235 cfs at approximately 11:15pm. The Commission concluded that the incident, due to an undetermined error in the Project's control system, is not classified as a violation of Article 403 (http://elibrary.ferc.gov:0/idmws/file_list.asp?document_id=14293747).

- In a letter dated March 18, 2015 (http://elibrary.ferc.gov:0/idmws/file_list.asp?document_id=14313774), FRREC followed-up with the Commission to report that the control system engineer inspected the Project on December 10, 2014. The engineer concluded that the bypass gate open circuit was set by a spurious signal spike introduced from another control circuit, possibly the water quality probes. Since the generation unit was not shut down, the Programmable Logic Controller (PLC) could not stop the gate from opening. The engineer modified the control software to activate unit shutdown whenever the bypass gate open circuit is set.

- Within the 2014 Annual Ramping Rate Report, it was identified that 26 instances of flow changes were not made in compliance with Article 403. The report indicates that the causes of 24 of the deviations are not determined. The remaining two events were not in compliance with the 50 cfs requirement and occurred due to power plant outages. In FERC's letter dated June 4, 2015 (http://elibrary.ferc.gov:0/idmws/file_list.asp?document_id=14344932), it was determined that the 24 ramping rate deviations are considered violations of Article 403 and the ramping rate monitoring plans. The two deviations resulting from plant outages are not considered violations since appropriate measures were taken in a timely manner to restore flow compliance. Under the June 4, 2015 letter FRREC was directed to file a plan and schedule for an upgraded operating system by July 31, 2015.

- On October 12, 2015 FRREC filed a ramping rate incident report to notify FERC of two deviations (http://elibrary.ferc.gov:0/idmws/file_list.asp?document_id=14386181). On September 23, 2015 an unexpected loss of siphon on the intake penstock occurred. Although FRREC normally anticipates the loss of siphon which is associated with a known lake level that occurs during drawdowns of the Island Park Reservoir, the Reservoir at the time of the September 23 event was still several feet above the expected level for siphon loss. The powerplant operator was alerted to a potential issue by a low flow alarm just before midnight on September 22. FRREC personnel traveled to the powerplant and attempted manual corrections to restore flow though the plant. These corrections caused flow changes that exceeded the ±50 cfs/30 min ramping rate restriction. The attempts to restore flow were unsuccessful. About 4:00 am it became apparent that the plant had lost the siphon even though the reservoir was still several feet above the usual level for siphon loss to occur. At this point the powerplant was taken off line and the Reclamation bypass gates were opened to restore and stabilize river flow. The ramping rate deviations occurred during the early morning hours and river flows during this period ranged from 300 - 850 cfs. On October 2, 2015 FRREC's attempt to reestablish the siphon and restart the powerplant led to additional ramping rate deviations. Several attempts were made but were unsuccessful. After each attempt flow was returned to the Reclamation bypass gate and flow increases slightly exceeded the ±50 cfs/30 min ramping rate restriction. The ramping rate deviations occurred between 8am and 2pm and river flows during this period ranged from 300 - 550 cfs. Within FERC's letter dated January 27, 2016 (http://elibrary.ferc.gov:0/idmws/file_list.asp?document_id=14422182) it was determined that FRREC's operators took appropriate measures to restore river flow in a timely manner and therefore, the September 23 and October 2, 2015 ramping rate deviations are not considered violations of Article 403 or the approved ramping rate monitoring plans.

- Within the 2015 Ramping Rate Report it was identified that river stage and ramping rate excursions increased during 2015 compared with 2014. FRREC reported that data suggest potential problems with the USGS gauge upon which the monitoring is based. Evidence for this includes the large number of excursions (76) that occurred when the plant was offline following siphon loss on September 23, 2015. Also within the report FRREC updated the Commission on the new operating system install progress. Because the contractor Bat Electric, Inc. (maintains proprietary control over software at the Project) was unable to perform the work due to work backlog, FRREC reported that it was unable to complete the new operating system install in 2015.

- On March 15, 2016 FRREC filed a status update for ramping rate issues identified in the 2014 and 2015 Annual Ramping Rate Reports (http://elibrary.ferc.gov:0/idmws/file_list.asp?document_id=14439062). Within the letter it was clarified that the 2015 Annual Ramping Rate Report incorrectly

identified the USGS gauge as the source of river stage data used in the ramping rate analysis. In fact, the river stage information used in the report was from FRREC's own gauge, which is combined with its water quality sensors and located near the USGS gauge. FRREC has recently recognized noise problems with the operation of its water quality sensors and suspects that the stage level gauge may also be susceptible to errors. It was concluded that many of the apparent ramping rate violations previously reported were caused by malfunction of the FRREC gauging station. Alternative USGS flow data suggests that the procedures currently being used by FRREC to adjust river flows during routine operations have been effective in maintaining ramping rates within specifications, thus minimizing adverse impacts to aquatic resources. FRREC's letter additionally requested an additional 6 months to complete the operating system upgrade. The 6-month extension request was based on a time frame provided by Bat Electric, Inc. Additionally, FRREC reported that beginning with 2016, FRREC has started utilizing the USGS gauge data to monitor and report on ramping rate requirements. This gauge is regularly maintained by the USGS and the data are available in real time. Based on analysis of 2015 data, FRREC expects that Type 2, 3 and 4 ramping rate exceedances during FRREC control of river flow will be significantly reduced in the future[1].

- In response to FERC's letter dated May 24, 2016 (http://elibrary.ferc.gov:0/idmws/file_list.asp?document_id=14462055), FRREC filed a letter on June 15, 2016 (http://elibrary.ferc.gov:0/idmws/file_list.asp?document_id=14470325) stating that due to uncertainty in scheduling the operating system upgrade and a reoccurrence with ramping rate problems, FRREC made the decision to take the Island Park Project offline until the operating system upgrades are completed. The Project was shutdown on June 10, 2016 at about 11:00pm and flow control was transferred to the Island Park Reservoir outlet gate. The decision to take the plant offline came after additional flow deviations that occurred June 3 – June 10, 2016. The powerplant tripped offline three times between June 2 and June 4. The trip events occurred on June 2 at about midnight, June 3 at about midnight, and June 4 about 3:00 am. Unlike previous events that have been reported to FERC, these events were exacerbated by malfunction of the automatic system for adjusting the Reclamation gates to compensate for lost powerhouse flow. The Reclamation gate opened too far, leading to flow spikes in the range of 400 – 900 cfs. A Bat Electric Inc. engineer arrived on June 6 to correct the malfunctioning gates. The engineer determined that a faulty analog card was the source of the problem. The card was replaced, gate position settings were reset, and gate operation was thoroughly tested. The plant was put back on line about 7:00 pm on June 7. Troubleshooting, setting and testing of the gate operation caused several ramping spikes on June 6 and June 7 where the 30-minute ramping rate exceeded 50 cfs. These deviations were in the range of 65 – 150 cfs per 30-minutes. On June 8 at

[1] FRREC controls river flow only when all flow is through the powerhouse. The Reclamation gates control river flow when the powerhouse is offline or when flows exceed the power plant's hydraulic capacity of 960 cfs. Reclamation gate settings are changed by irrigators outside the control of FRREC.

about 5:00pm Unit 1 tripped offline. The Reclamation gates opened correctly and no excessive ramping event occurred. Unit 1 was left offline and the plant continued to operate using only Unit 2. Manual flow adjustments were performed on June 9 and June 10 to transfer additional flow between the Reclamation gates and Unit 2. During this process several small ramping spikes occurred, but these spikes were at or below the 50 cfs per 30-minute requirement. At about 10:30 pm on June 10 Unit 2 tripped offline. A ramping spike of about 80 cfs per 30-minutes accompanied the trip event. In FERC's letter dated October 26, 2016 (http://elibrary.ferc.gov:0/idmws/file_list.asp?document_id=14507074), it was determined that the June ramping rate deviations are not considered violations of Article 403 or the approved ramping rate plan. The deviations occurring June 2-4, 2016 were exacerbated by the malfunctioning equipment and the deviations occurring June 6-7, 2016 were caused by troubleshooting, setting, and testing of gate operation.

- Within FERC's October 26, 2016 letter (http://elibrary.ferc.gov:0/idmws/file_list.asp?document_id=14507074) it was confirmed that the upgrade of the plant's control system was performed from June 27-30, 2016 and the plant was run until July 28, 2016 but taken offline due to inability to meet DO requirements. The plant was started briefly in August to perform gate calibrations. The Project will not come back online until reservoir levels increase, most likely in spring 2017. Within the letter, FERC requires that FRREC file a status report by July 1, 2017 that discusses how the upgrades have improved Project compliance. It was also determined that FRREC must also file by July 1, 2017 an amendment to Article 403 (approved ramping rate plan) regarding use of the USGS gauge for compliance purposes.

As noted within the letter sequence, FRREC has replaced the Project control system as appropriate and has calibrated the system such that when the Reservoir refills in spring 2017 and the Project comes back online again, the Project will be able to easily meet flow requirements going forward.

Additionally, as prescribed within Articles 107, 130, 401, and 402, FRREC submits annual water quality reports to the Commission. As stated within the 2015 Water Quality Report (http://elibrary.ferc.gov:0/idmws/file_list.asp?document_id=14439074), analysis of 2015 water quality data collected by the licensee resulted in the conclusion that compliance with license requirements could not be reliably determined due to data quality problems. Although FRREC has taken actions to correct the data collection problems encountered during 2015 and to assure that all water quality requirements will be met in 2016, FERC's letter dated June 3, 2016 (http://elibrary.ferc.gov:0/idmws/file_list.asp?document_id=14466287) determined that because the data collected in 2015 contained a number of gaps which resulted in insufficient data to determine compliance, the Project was found to be in violation of Article 107. Also within the June 3, 2016 letter, FERC determined that FREEC was in violation of Article 130 as water quality data for the years 2010 through 2014 was not

collected by FRREC's subcontractor and annual reports were not filed with the Commission.

So to ensure FRREC meets water quality compliance criteria in 2016, new water quality sondes as well as new temperature gages have been installed at the Project. FRREC has also proactively invested in a $125,000 system upgrade for the tailrace aeration system.

7. The Island Park reservoir (not a feature of the Island Park Hydroelectric Project) is full at an elevation of 6,303 feet with a surface area of approximately 8,084 acres. The reservoir's 127,265 acre-feet of storage is used for irrigation demands by the Fremont-Madison Irrigation District.
8. The Project occupies 1.2 acres of USFS lands through a Special Use Permit issued to the licensee on April 23, 1992 (available on microfilm only). The Project's primary features are the penstock, powerhouse, valve house, and an aeration basin (the Island Park Dam and Reservoir are not Project features). The dam is a 9,448-foot-long earthfill structure with a maximum height of 91 feet. The concrete valve house is located on top of the dam. There is a screen intake structure with 3/8 inch openings. The 720-foot-long by 10 feet in diameter penstock leads from the valve house to the concrete powerhouse. There is a 60 foot by 100 foot aeration basin at the base of the tailrace where blowers are used to aerate the tailrace releases.
9. The Island Park Dam and Reservoir are not features of the Island Park Hydroelectric Project. At a full elevation the reservoir has a surface area of approximately 68,084 acres.
10. The Island Park Dam and Reservoir are not a features of the Island Park Hydroelectric Project. There are approximately 1,552 acres included in a 200 foot zone extending around the Island Park Reservoir. These lands are federally and privately owned.
11. Please find attached in Appendix B, a list of contacts from the relevant resource agencies and non-governmental organizations that have been involved in proceedings involving the operations of the Project either during the relicensing process or thereafter.
12. Please find attached in Appendix C, a description of the facility, its mode of operation, photographs. Project plans and maps are additionally included in Appendix C.

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. 1988 License Article 403 contains ramping rate requirements for Project operations. As amended, the Project targets flow releases of 30 cfs - 35 cfs per half hour and releases no greater than 50 cfs per half hour. As stated within FERC's Order Amending Ramping Rate Monitoring Plan (http://elibrary.ferc.gov:0/idmws/file_list.asp?document_id=173341), the Licensee proposed modifications to Article 403, and the Idaho Department of Fish and Game (IDFG), U.S. Fish and Wildlife Service (USFWS), and USFS concurred with the Licensee's proposal within letters dated August 6, 1996, September 5, 1996, and December 19, 1996, respectively.

Per Article 403, FRREC developed an original Ramping Rate Monitoring Plan which was approved by FERC on March 8, 1995 (http://elibrary.ferc.gov:0/idmws/file_list.asp?document_id=1732210) and submits annual Ramping Rate Reports to FERC. The Project's annual ramping rate reports (2010 - 2015) and FERC's letter responses evaluating filed ramping rate reports for compliance are included in links below:

- 2010 Annual Ramping Rate Report: http://elibrary.ferc.gov:0/idmws/file_list.asp?document_id=13910799
- FERC Letter Reviewing 2010 Annual Ramping Rate Report: http://elibrary.ferc.gov:0/idmws/file_list.asp?document_id=13927177
- 2011 Annual Ramping Rate Report: http://elibrary.ferc.gov:0/idmws/file_list.asp?document_id=14001142
- FERC Letter Reviewing 2011 Ramping Rate Report: http://elibrary.ferc.gov:0/idmws/file_list.asp?document_id=14022680
- 2012 Annual Ramping Rate Report: http://elibrary.ferc.gov:0/idmws/file_list.asp?document_id=14086656
- FERC Letter Reviewing 2012 Ramping Rate Report: http://elibrary.ferc.gov:0/idmws/file_list.asp?document_id=14096596

- 2013 Annual Ramping Rate Report:
http://elibrary.ferc.gov:0/idmws/file_list.asp?document_id=14201122

- FERC Letter Reviewing 2013 Ramping Rate Report:
http://elibrary.ferc.gov:0/idmws/file_list.asp?document_id=14293747

- 2014 Annual Ramping Rate Report:

http://elibrary.ferc.gov:0/idmws/file_list.asp?document_id=14329659
- FERC Letter Reviewing 2014 Ramping Rate Report:

http://elibrary.ferc.gov:0/idmws/file_list.asp?document_id=14344932

- 2015 Annual Ramping Rate Report:
http://elibrary.ferc.gov:0/idmws/file_list.asp?document_id=14426743

A summary of dialogue FRREC has had with FERC concerning ramping rate flows at the Project is summarized in Section 1.1 above. As noted in Section 1.1, FRREC has replaced the Project control system as appropriate and has calibrated the system such that when the Reservoir refills in spring 2017 and the Project comes back online again, the Project will be able to easily meet flow requirements going forward. Upon continued operation of the Project's new control system and finalization of the amended ramping rate plan, FRREC will file with LIHI corresponding agency consultation letters confirming the facility's compliance with ramping rate flows.

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 bypasssed reaches, that at a minimum meets Aquatic Base Flow standards or "good" habitat flow standards calculated using the Montana-Tennant method?*

YES. The Island Park dam is owned by the USBR, and the USBR has complete control over releases from the dam. The Commission and agencies therefore were prohibited during the Project licensing process to issue Project minimum flows/ alter any USBR flow regimes.

The Project cannot go online unless there is 185 cfs available, when the plant is offline flows come out of USBR gates on the dam. Outflow from the USBR gates is decided by USBR, Fremont Madison Irrigation District, and Henry's Fork Foundation during Drought Management Meetings. The three organizations together make the decision as to how much flow is released from the dam. FRREC attends these meetings and accepts and utilizes the flows as decided upon in these meetings. FRREC utilizes the determined flow as it passes through the powerplant and may only manage ramping rates below the Project.

As stated by the IDEQ on December 22, 2016 (Appendix D), “The manipulations of flows are at the request of irrigation or other use demands through the US Bureau of Reclamation. As summarized by Rob VanKirk, at the Henry’s Fork Foundation, “The Island Park Hydroelectric plant is operated as a “run-of-river” facility. Although power-plant constraints are considered in DMP [Drought Management Plan] decisions, the plant has little influence on streamflow, which is determined primarily by irrigation storage and delivery needs, with attention given to winter-flow needs for the fishery and to power-plant constraints and capacity, when possible”.

A Montana-Tennant method analysis of flows below the Island Park Dam was conducted in 2000 as part of the Project’s original LIHI certification application. The study determined that flows released from the Project met "good" habitat standards overall and "excellent" habitat standards in the area between the Island Park Dam and the Buffalo River (Appendix D). Per email dated December 22, 2016 (Appendix D), the IDEQ has reviewed the Montana-Tennant Method in partnership with local stakeholder groups. Although it appears the 2000 analysis is not an accurate estimation of flows, the IDEQ determined that “the actual hydropower use of the Island Park Dam does not, by generating electricity, impact streamflow.”

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.** The Project Water Quality Certificate was issued on February 7, 1986.

b) **YES.** The IDEQ classifies Henry's Fork waters from the Island Park Dam to Thurman Creek as Category 3, "Unassessed Waters" (IDEQ 2014). Idaho Category 3 Waters are defined as those waters with insufficient data and information to determine if beneficial uses are being attained. The IDEQ does identify the following designated uses for this stretch of waterway to include aesthetic, agricultural water supply, cold water aquatic life, domestic water supply, industrial water supply, primary contact recreation, salmonid spawning, and wildlife habitat.

Despite the lack of information for this section of waterway, 1988 License Articles 106 *Water Quality Study (*http://elibrary.ferc.gov:0/idmws/file_list.asp?document_id=1698633), 107 *Water Quality Monitoring and Mitigation Plan (*http://elibrary.ferc.gov:0/idmws/file_list.asp?document_id=1742186), 130 Total Gas and Temperature Monitoring Equipment, 401 Maintenance of Dissolved Oxygen Concentration, and 402 Temperature as amended, require that waters within the Island Park Hydroelectric Project vicinity are closely monitored to ensure that they meet state standards as well as designated use requirements. The Project additionally provides an aeration facility as required under Article 129 to ensure DO concentrations are supplemented after waters leave the Reservoir and the Project turbines. The aeration facility retains discharged water for two minutes at peak flows and adds 25,000 pounds of oxygen per day into the water.

Additionally, in 1995 FRREC built an adjustable rubber dam at the spillway of the Island Park dam. This rubber dam is not part of the FERC-licensed Project, but was built for the purposes of maximizing power generation at the Island Park Project. Besides providing the opportunity for Island Park Project to maximize hydropower production, the rubber dam allows for mixing of water released from the bottom of the reservoir with water from the surface of the reservoir. This

allows overall releases from the Island Park Reservoir to be mixed in an effort to optimize water temperatures for downstream fish habitat requirements.

In accordance with the Water Quality Monitoring and Mitigation Plan (http://elibrary.ferc.gov:0/idmws/file_list.asp?document_id=174218), FRREC maintains the four following water quality parameters and associated limits below the Project:

1) DO concentration minimum of 7 mg/l (state standard);

2) Water temperature, from April through October not to exceed 17°C maximum, and from November through May not to exceed 3°C minimum;

3) Total gas pressure not to exceed 110 percent (state standard);

4) Turbidity not to exceed 5 nephelometric turbidity units.

As prescribed within Articles 107, 130, 401, and 402, FRREC submits annual water quality reports to the Commission. As stated within the 2015 Water Quality Report (http://elibrary.ferc.gov:0/idmws/file_list.asp?document_id=14439074), analysis of 2015 water quality data collected by the licensee resulted in the conclusion that compliance with license requirements could not be reliably determined due to data quality problems. Although FRREC has taken actions to correct the data collection problems encountered during 2015 and to assure that all water quality requirements will be met in 2016, FERC's letter dated June 3, 2016 (http://elibrary.ferc.gov:0/idmws/file_list.asp?document_id=14466287) determined that because the data collected in 2015 contained a number of gaps which resulted in insufficient data to determine compliance, the Project was found to be in violation of Article 107. Also within the June 3, 2016 letter, FERC determined that FREEC was in violation of Article 130 as water quality data for the years 2010 through 2014 was not collected by FRREC's subcontractor and annual reports were not filed with the Commission.

So to ensure FRREC meets water quality compliance criteria in 2016, new water quality sondes as well as new temperature gages have been installed at the Project. FRREC has also proactively invested in a $125,000 system upgrade for the tailrace aeration system.

Per a November 29, 2016 voicemail left by Michael Morse at the USFWS (USFWS Response_11-29-2016.wav), it was confirmed that the facility is in compliance with

Article 130 as FRREC took the facility offline to address DO and fix the diffusion and aeration system.

Upon collection of one year of data using the new water quality monitoring instruments, and submission of the 2016 water quality report, FRREC will provide LIHI with agency letters confirming project compliance with water quality parameters.

A list of links to applicable websites depicting state water quality ratings/standards are included below:

- Idaho Water Quality Standards: https://adminrules.idaho.gov/rules/current/58/0102.pdf

- 2012 U.S. EPA Waterbody Report for Island Park Reservoir: ..\..\04 Project Information\Island Park\Water Quality\Waterbody Quality Assessment Report _ WATERS _ US EPA.pdf
- 2012 Idaho Integrated Report: http://www.deq.idaho.gov/water-quality/surface-water/monitoring-assessment/integrated-report.aspx
- 2012 List of 303(d) Listed Waters: https://iaspub.epa.gov/tmdl/attains_impaired_waters.impaired_waters_list?p_state=ID&p_cycle=2012

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 Island Park 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/725927-2010-integrated-report.pdf), Henry's Fork waters from the Island Park Dam to Thurman Creek were not assessed for impairment (IDEQ 2014). Please see above for 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 know to have been present historically?

NO. No anadromous or catadromous fish have historically existed in the Project area.

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

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

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?*

N/A.

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

YES. The USFS and USBR submitted 4(e) conditions, incorporated into 1988 License Article 128, as amended, that require the Licensee to consult with USFS and USBR on plans for fish screen design and operation. Appendix F includes FERC's 1992 order approving design drawings for intake structure and fish screens and the Licensee's submittal of the 1992 Scenario for Operation of the Fish Screen Cleaner as required by Article 128. The 2006 Environmental Inspection Report also concludes that the Project is in compliance with License Article 128 (Appendix G).

Per a November 29, 2016 voicemail left by Michael Morse at the USFWS (USFWS Response_11-29-2016.wav), it was confirmed that the facility is operating in compliance with License Article 128. USFWS believes the fish screen plan is working quite well and

working in spirit of Article 128. Appendix F additionally includes September 17, 2015 comments from the IDFG also confirming the Project's compliance with fish screens. Follow-up emails have been sent to IDFG for a firmer answer, as requested by LIHI, but no responses have been received (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?*

NO. No 200-foot buffer zone is present. The Island Park Reservoir is part of the U.S. Bureau of Reclamation Island Park Dam and is not included in the project boundary.

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?*

NO. No watershed enhancement fund is present. The Island Park Reservoir is part of the U.S. Bureau of Reclamation Island Park Dam and is not included in the project boundary.

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)?*

NO. No shoreland buffer plan has been developed. The Island Park Reservoir is part of the U.S. Bureau of Reclamation Island Park Dam and is not included in the project boundary.

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. The Project is in compliance with 1988 License Article 104 *USFS Consultation* which requires annual consultation with the USFS to ensure protection of natural resources. The most recent consultation occurred on October 23, 2014 and the USFS found the facility to be in compliance with the terms and conditions of the Special Use Permit (Appendix A). Additionally, the 2006 Environmental Inspection Report concludes that the Project is in compliance with License Articles 108 *Erosion and Sediment Control Plan*, 119 *Re-vegetation*, 131 *Erosion and Sediment Control Plan*. Appendix G includes the 2006 Environmental Inspection Report.

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 identified to have potential presence within the Project vicinity. This list of species and their corresponding federal classifications are derived from the September 22, 2016 USFWS Species by County Report (Appendix H) and confirmed by a November 29, 2016 voicemail left by Michael Morse at the U.S. Fish and Wildlife (USFWS Response_11-29-2016.wav). State-listed species are confirmed by an IDFG email dated July 7, 2016 (Appendix H). Although the information provided within the July 7 email pertains to the neighboring Buffalo River Hydroelectric Project (FERC No. 1413), species identified for Buffalo River Project align with the species list compiled for Island Park Project (Appendix H). Emails have been sent to the IDFG for specific confirmation of state-listed species presence, but feedback has not been provided (Appendix H).

- Grizzly bear is listed as a federal and state threatened species (USFWS 2015a). 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. Grizzly bear habitat maintenance and improvement are not federally managed in the Project area.

- Canada lynx is listed as a federal and state threatened species (USFWS 2015b). 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 (USFWS 2015c). 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 downstream from the neighboring Buffalo River Hydroelectric Project (FERC Project No. 1413) (letter from Deb Mignogno, Supervisor, Eastern Idaho Sub-Office, USFWS, Chubbuck, Idaho, December 9, 2002). Ute Ladie's Tresses has not been encountered in the Project vicinity.

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-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-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. The facility has not received an Incidental Take permit to take a listed species.

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. A biological opinion has not been issued for any threatened or endangered species at the Project.

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. During normal operations, the Island Park Hydroelectric Project has very minimal, if no impact on listed species subject to utilize the area:

Grizzly Bear: Although the Project area is in grizzly bear habitat, no grizzly bears have been reported in the immediate Project area (FERC 1988).

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 presence of ute ladie's tresses has not been encountered in the Project vicinity.

A Biological Assessment for the bald eagle, (which has since been removed from the threatened and endangered species list) was conducted in 1992 at the Project (Appendix H). The Biological Assessment states that the Project had no adverse effect on bald eagles. The Biological Assessment also states that the continued operation of the Project would "not likely affect" any other threatened or endangered species.

Per a November 29, 2016 voicemail left by Michael Morse at the U.S. Fish and Wildlife (USFWS Response_11-29-2016.wav), it was confirmed that the facility has no adverse effects on the Grizzly Bear, Canada Lynx, or the Ute Ladie's Tresses. Per the USFWS review, Grizzly Bears may walk through the area but since the Project is so small, the bears would likely use the road to get from one place to another. The USFWS also determined that Canada Lynx are not likely found in the Project area and that the Project area does not provide good habitat for the Ute Ladie's Tresses. Appendix H additionally includes IDFG review stating that the Project does not negatively impact any state or federally listed threatened and endangered species.

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. 1988 License Article 405 *Cultural Resources* requires the Licensee to consult with the State Historic Preservation Office (SHPO), the USFS, and USBR prior to conducting any land disturbing activities. If the Licensee were to discover previously unidentified archaeological or historic properties during construction activities, the Licensee shall stop all land-clearing and land-disturbing activities and consult with the SHPO, USFS, USBR, and file a cultural resource management plan. Please see Appendix I to view comments from the Idaho State Historic Preservation Office confirming Project compliance with Article 405. The 2006 Environmental Inspection Report (Appendix G) additionally concludes that the Project is in compliance with Article 405.

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 Article 105 *Recreation Plan* and Article 133 *Report on Recreational Resources.* Article 133 required the Licensee to file a report summarizing a list of possible improvements that may be made to existing recreational resources while Article 105 required the Licensee to file a finalized recreation plan approved by the USFS for accommodation of recreation activities.

After consultation with resource agencies, the Licensee made improvements to the Box Canyon Boat Launch area located directly downstream of the Project. Improvements included installation of public restrooms, enhancements to the existing access road and boat launch, construction of a fishing platform, installation of interpretive signs, construction of a trail, and reconstruction of the parking area.

The September 18, 1992 FERC approval of the Licensee's Revised Report on Recreation Resources and the 1994 FERC order approving as-built recreation drawings are included in Appendix J. Appendix J additionally includes August 31, 2015 comments from the Idaho Department of Parks and Recreation, November 18, 2016 comments from the USFS, and December 20, 2016 comments from the National Park Service confirming Project compliance with Articles 105 and 133. The 2006 Environmental Inspection Report also concludes that the Licensee is in compliance with Articles 105 and 133 (Appendix G).

Additionally, although Fall River had not previously collected any Form 80 recreation data, Fall River started keeping track of recreational visitors in 2015. A FERC Form 80 for Island Park was completed in 2016 and is attached in Appendix J.

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 Project does not obstruct access to the reservoir or tailwater. Standard Article 18 requires the Project to allow free public access to the Project waters and adjacent lands. The 2006 Environmental Inspection Report states that the Licensee is in compliance with this Article (Appendix G).

Additionally, the Project is located on USFS lands where there are ample recreation opportunities including two campgrounds, two county parks, and three boat launches. In conjunction with construction of the Project in 1994, the Licensee made improvements to the Box Canyon Boat Launch area owned and operated by the USFS and located directly downstream of the Project. Improvements included installation of public restrooms, enhancements to the existing access road and boat launch, construction of a fishing platform, installation of interpretive signs, construction of a trail, and reconstruction of the parking area. More information on the Box Canyon Boat Launch may be accessed through the USFS Recreation website (http://www.fs.usda.gov/recarea/ctnf/recarea/?recid=53797). Maps of the Box Canyon Boat Launch recreation area in relation to the Island Park Hydroelectric Project are included in Appendix J.

9.0 FACILITIES RECOMMENDED FOR REMOVAL

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

NO. There are not any recommendations from resource agencies for the removal of the Island Park Dam.

10.0 REFERENCES

Federal Energy Regulatory Commission (FERC). 1988. Order Issuing Major License and Dismissing Preliminary Permit with Prejudice – Island Park Hydroelectric Project. October 19, 1988.

International Society for Endangered Cats ISEC Canada. 2015. No Canada Lynx Recovery Plan Until 2018. Available online at: http://www.wildcatconservation.org/no-canada-lynx-recovery-plan-until-2018/ [Accessed 12/21/2016].

State of Idaho Department of Environmental Quality (IDEQ). 2014. Idaho's 2012 Integrated Report: Final. Boise, ID. Available online at: https://www.deq.idaho.gov/media/1117323/integrated-report-2012-final-entire.pdf [Accessed August 6, 2015].

U.S. Fish and Wildlife Service (USFWS). 2015. Species By County Report: Fremont County, ID. Environmental Conservation Online System. Available online at: http://www.fws.gov/endangered/ [Accessed on August 7, 2015].

U.S. Fish and Wildlife Service (USFWS). 2015a. Species Profile for Grizzly Bear (Ursus arctos horribilis). Available online at: http://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=A001 [Accessed August 6, 2015].

U.S. Fish and Wildlife Service (USFWS). 2015b. Species Profile for Canada Lynx (Lynx Canadensis). Available online at: http://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=A073 [Accessed August 6, 2015].

U.S. Fish and Wildlife Service (USFWS). 2015c. Species Profile for Ute Ladie's-Tresses (Spiranthes diluvialis). Available online at: http://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=Q2WA [Accessed August 6, 2015].

APPENDIX A

PROJECT LICENSE AND USFS SPECIAL USE PERMIT

Discussion

The Board has previously held in *Petro-Lewis* that section 271.1104(e) did not establish a mandatory deadline of December 31, 1984, for the submission of claims and that the regulations did not bar claims for retroactive production-related costs invoiced after December 31, 1984.[3] The Commission upheld the Board in an order issued on July 2, 1987, stating that:

> [T]he Commission sees no harm in gas purchasers being required to pay lawful claims under their own contracts, even though such claims have not been filed promptly. The purchasers, of course, are free to raise any defenses they may have under state laws, either in state or federal courts, on the basis of any undue delay in submission of claims.[4]

Consistent with the orders issued by the Board and the Commission in *Petro-Lewis*, the Board concludes that the failure of a first seller to submit data required under section 271.1104(f) prior to December 31, 1984, does not bar its claim for retroactive production-related costs under section 271.1104(e).[5] The Board notes, however, that whether the purchaser pays the seller's claims for any production-related costs reimbursable under the regulations is a contractual matter which must be resolved by the parties or the courts if the parties are unable to resolve the matter by themselves.

In addition, the Board also notes that if the contract(s) involved in each complaint was included on the lists the purchaser filed pursuant to Order No. 473, the question of whether the area rate clause authorizes the collection of a delivery allowance will be resolved in the proceedings held pursuant to the procedures established in Order No. 473.[6]

Finding and Order

Consistent with the Petro-Lewis orders, the Board finds and orders that the failure of a first seller to submit data required under section 271.1104(f) prior to December 31, 1984, does not bar its claim for retroactive production-related costs under section 271.1104(e).

Appendix

Docket No./ Date Filed	*Complainant*	*Purchaser*
GP87-57-000 06/11/87	Burk Royalty Company	Trunkline Gas Company
GP88-5-00 11/16/87	Newman Brothers Drilling Company	Williston Basin Interstate Pipeline Company
GP88-23-000 06/10/88	Cobra Oil & Gas Corporation	ANR Pipeline Company
GP88-25-000 07/05/88	Cobra Oil & Gas Corporation	Texas Eastern Transmission Corporation

[¶ 62,041]

Fall River Rural Electric Cooperative, Inc., Project No. 2973-004; Rocky Mountain Hydro, Inc., Project No. 9366-000

Order Issuing Major License and Dismissing Preliminary Permit With Prejudice

(Issued October 19, 1988)

Fred E. Springer, Director, Office of Hydropower Licensing.

Fall River Rural Electric Cooperative, Inc. (Fall River) has filed a license application under Part I of the Federal Power Act (Act) to construct, operate, and maintain the Island Park Hydroelectric Project, located at the Bureau of Reclamation's Island Park dam in Fremont County, Idaho, on the Henry's Fork of the Snake River. The project would also occupy lands of the United States within the Targhee National Forest.

Notice of the application has been published. The motions to intervene that have been

[3] *Petro-Lewis Corporation*, 37 FERC ¶ 62,090 (1986).

[4] 40 FERC ¶ 61,009 (1987).

[5] The Board issued a similar order on August 18, 1988, in Docket No. GP87-2-000 *et al.* [44 FERC ¶ 62,152].

[6] Under these procedures, the protested area rate clauses will be reviewed by the Commission's Administrative Law Judges and will be resolved at hearing or by summary disposition.

granted and the comments filed by agencies and individuals have been fully considered in determining whether to issue this license.

The following agencies and individuals filed motions to intervene with environmental and safety concerns for the Island Park Project: the Department of the Interior (Interior),[1] the Idaho Department of Water Resources and the Idaho Water Resource Board (IDWR & IWRB), the Idaho Department of Fish and Game (IDFG), Henry's Fork Foundation, Inc. (Henry's Fork), Fremont-Madison Irrigation District (District), and the Greater Yellowstone Coalition (Coalition).

Interior, IDFG, and Coalition express concerns that the project may cause adverse impacts to fish and wildlife resources in the area.

IDFG is also concerned that any modified flow release from Island Park reservoir could negatively affect water temperature and dissolved oxygen levels downstream of the project and that any construction activities may increase sedimentation of the Henry's Fork River.

IDWR & IWRB request that any license issued at the Island Park dam be consistent with state water law and with provisions of the Idaho State Water Plan, which provides a comprehensive plan of development of the water resources of Idaho. These concerns are addressed in the staff's attached environmental assessment (EA).

The District expresses concern that the project could damage Island Park dam and restrict irrigation water use. The District's concern is addressed in the staff's attached Safety and Design Assessment (S&DA).

Comprehensive Plans

Section 10(a)(2) of the Act requires the Commission to consider the extent to which a project is consistent with federal or state comprehensive plans (where they exist) for improving, developing, or conserving a waterway or waterways affected by the project.[2]

The staff reviewed four comprehensive plans that address various aspects of waterway management in relation to the proposed project.[3] No conflicts were found with three of the comprehensive plans, however, a potential conflict was found with the State Water Plan (ISWP).

In the ISWP, the Idaho Water Resources Board says that it is the policy of Idaho that the state has sovereignty over decisions affecting the development and use of its water resources and that the state opposes any attempt by the federal government or any other entity to usurp the state's role in these areas. The Commission' position, based on *First Iowa Hydro-Electric Coop. v. FPC,* 328 U.S. 152 (1946), is that state laws or requests that interfere with the Commission's comprehensive planning responsibilities under section 10(a)(1) of the Act are preempted and that the only rights saved for the states by section 27 of the Act are property rights. However, in this proceeding, no issue concerning the allocation of water rights has been raised nor has the state intervened on the basis of sovereignty. In addition, based on the comments of the state agencies and the fact that a water-quality certification was granted for the project, staff concluded that the state does not object to development of the site for hydropower so long as its recommendations for the protection of resources are considered in the licensing process.

Based upon a review of the agency and public comments filed in this proceeding, and on the staff's independent analysis, subject to the constraints of the Electric Consumers Protection Act of 1986 (ECPA),[4] the Island Park Dam Hydroelectric Project is best adapted to a comprehensive plan for the Henry's Fork of the Snake River.

Recommendations of Federal and State Fish and Wildlife Agencies

Section 10(j) of the Act requires the Commission to include license conditions based on recommendations of federal and state fish and wildlife agencies for the protection, mitigation, and enhancement of fish and wildlife. In the EA, the staff addresses the concerns of the federal and state fish and wildlife agencies, and makes recommendations consistent with those of the agencies.

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[1] Interior's untimely motion to intervene, filed on January 13, 1986, was granted on April 28, 1988.

[2] Order No. 481-A, 53 Fed. Reg. 15,802 (May 4, 1988), *FERC Statutes and Regulations* ¶ 30,811 (1988).

[3] Northwest Power Planning Council's Conservation and Electric Power Plan and Columbia River Basin Fish and Wildlife Program, 1986, and Final Amendment Document, 1987; Idaho Water Resource Board's State Water Plan, 1986; Idaho Department of Parks and Recreation's Statewide Outdoor Recreation Plan, 1983; and Idaho Department of Fish and Game's Fisheries Management Plan, 1986.

[4] *See* page 8 of the EA for further discussion of ECPA's specific mandatory requirements concerning this project that does not allow significant and permanent alternation to streamflow.

Competing Application

The license application was filed in competition with a preliminary permit application filed by Rocky Mountain Hydro, Inc. (Rocky Mountain) for Project No. 9366-000. Rocky Mountain failed to substantiate the technical, environmental, economic, and other aspects of its proposal, and its application was therefore dismissed without prejudice so that it could be automatically reinstated if the competing development application were subsequently denied. *See Dennis V. McGrew*, 32 FERC ¶ 61,229 (1985). Fall River has met statutory and regulatory license requirements, including demonstrating its ability to carry out its plans. Rocky Mountain's preliminary permit application is therefore dismissed with prejudice.

Summary of Findings

Background information, analysis of impacts, support for related license articles, and the basis for a finding of no significant impacts on the environment are contained in the EA. Issuance of this license is not 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 constructed, operated, and maintained in accordance with the requirements of this license. Analysis of related issues is provided in the S&DA.

The Director of the Office of Hydropower Licensing concludes that the project would not conflict with any planned or authorized development and would be best adapted to comprehensive development of the waterway for beneficial public uses.

The Director orders:

(A) This license is issued to Fall River Rural Electric Cooperative, Inc. for a period of 50 years, effective the first day of the month in which this order is issued, to construct, operate, and maintain the Island Park Hydroelectric Project. This license is subject to the terms and conditions of the Act, which is incorporated by reference as part of this license, and subject to the regulations the Commission issues under the provision of the Act.

(B) The project consists of:

(1) All lands, to the extent of the licensee's interests in those lands, enclosed by the project boundary shown by exhibit G:

Exhibit	*FERC Drawing No.*	*Showing*
G-1	2973-12	Boundary Map
G-2	2973-13	Transmission Line
G-3	2973-14	Ownership Map

(2) Project works consisting of: (a) a screened intake structure; (b) a 700-foot-long, 10-foot-diameter, siphon conduit at the left (east) abutment; (c) a powerhouse containing two generating units, each rated at 2,400 kW; (d) 4.16-kV generator leads; (e) a 4.16/24.9-kV, 5/5.5/6.6-MVA transformer; (f) a 15,000-foot-long, 24.9-kV buried transmission line; (g) a 24.9/46-kV transformer; (h) an aeration facility, and (i) appurtenant facilities.

The project works generally described above are more specifically shown and described by those portions of exhibits A and F recommended for approval in the S&DA.

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

(C) The exhibit G described above and those sections of exhibits A and F recommended for approval in the S&DA are approved and made part of the license.

(D) This license is subject to the following terms and conditions submitted by the Forest Service (articles 101 through 114) and the Bureau of Reclamation (articles 115 through 133) under section 4(e) of the Act:

Article 101. Within 6 months following the date of issuance of this license and before starting any activities the Forest Service determines to be of a land-disturbing nature, the licensee shall obtain from the Forest Service a special-use authorization for the occupancy and use of National Forest System lands and shall file that authorization with the Director, Office of Hydropower Licensing.

The licensee may commence land-disturbing activities authorized by the license and by special-use authorization 60 days following the filing date of such authorization, unless the Director, Office of Hydropower Licensing, prescribes a different commencement schedule.

Notwithstanding the authorizations granted under the Federal Power Act, National Forest System lands within the project boundaries shall be managed by the Forest Service under the laws, rules, and regulations applicable to the National Forest System. The terms and conditions of the Forest Service special-use authorization are enforceable by the Forest Service under the laws, rules, and regulations applicable to the National Forest System. The violation of such terms and conditions also shall be subject to applicable sanctions and enforcement procedures of the Commission at

the request of the Forest Service. 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 on matters which the Forest Service deems to affect National Forest System resources.

Article 102. Before any construction of the project occurs on National Forest System land, the licensee shall obtain the 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 resources. The licensee shall follow the schedules and procedures for design review and approval specified in the Forest Service special-use authorization. As part of such prior written approval, the Forest Service may require adjustments in final plans and facility locations to preclude or mitigate impacts and to assure that the project is compatible with on-the-ground conditions. Should such necessary adjustments be deemed by the Forest Service, the Commission, or the licensee to be 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 and article 3 shall be made subject to any new terms and conditions of the Secretary of Agriculture made pursuant to section 4(e) of the Federal Power Act.

Article 103. Notwithstanding any license authorization to make changes to the project, the licensee shall get written approval from the Forest Service prior to making any changes in the location of any constructed project features or facilities, or in the uses of project lands and waters, or any departure from the requirements of any approved exhibits filed with the Commission. Following receipt of such approval from the Forest Service, and at least 60 days prior to initiating any such changes or departure, 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 amendment or other requirements of article 2 or article 3 of this license.

Article 104. Each year during the 60 days preceding the anniversary date of the license, the licensee shall consult with the Forest Service with regard to measures needed to ensure protection and development of the natural resource values of the project area. 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 Commission reserves the right, after notice and opportunity for hearing, to require changes in the project and its operation that may be necessary to accomplish natural resource protection.

Article 105. Within 1 year following the date of issuance of this license and before starting any activities the Forest Service determines to be of a land-disturbing nature on National Forest System land, the licensee shall file with the Director, Office of Hydropower Licensing, a plan approved by the Forest Service for accommodation of project-induced recreation.

The licensee shall not commence activities the Forest Service determines to be affected by the plan until after 60 days following the filing date, unless the Director, Office of Hydropower Licensing, prescribes a different commencement schedule.

Article 106. Prior to full project operation and after consultation with the Forest Service, the U.S. Fish & Wildlife Service (USF&WS), the Idaho Department of Fish and Game (IDF&G), and the Idaho Department of Health and Welfare (IDH&W), the licensee shall complete a study of existing water quality of Henry's Fork and shall file this study, along with comments from the Forest Service, USF&WS, IDF&G and IDH&W, with the Director, Office of Hydropower Licensing (OHL). This study must, as a minimum, monitor existing natural water quality through a period of one year. Parameters to be monitored are: (a) dissolved oxygen (DO to be measured in milligrams per liter); (b) temperature (to be measured in degrees centigrade); (c) total gas pressure (TGP to be recorded as a percent of saturation); and (d) turbidity (to be measured in NTU's). Sampling shall be conducted at stations established by the agencies and licensee during preparation of the license application, including station X4 (see licensee's map dated 9-4-86, on file). Sampling frequency shall be continuous measurement with hourly recording of calculated averages. The study shall be designed to determine the natural existing daily and seasonal variations for all sampled parameters and stations (DO, temperature, TGP, and turbidity) and to identify precision and accuracy of monitoring instrumentation. These data will be used, in part, to define existing and long-term water quality and facilitate final design of a long-term water quality monitoring and project mitigation procedures plan (article 107). The Forest Service, after consultation with USF&WS, IDF&G, and IDH&W, may approve the study plan or require its modification.

Following completion of this study, the data shall be summarized in report form and submitted to Director, OHL, the Forest Service,

USF&WS, IDF&G, and IDH&W for their review and comments.

If the water quality study completed by the licensee indicates to the Forest Service or the Director, OHL, that changes in project structures or operations are necessary to maintain existing water quality, the licensee shall then file with the Director, OHL, within 60 days after completion of the study, a mitigation plan, approved by the Forest Service, with comments received from the USF&WS, IDF&G, and IDH&W, for implementing the necessary changes in project structures or operations.

Article 107. Within one year following the date of issuance of this license but prior to commencement of full project operation, the licensee, after consultation with the Forest Service, U.S. Fish and Wildlife Service (USF&WS), the Idaho Department of Fish and Game (IDF&G), and Idaho Department of Health and Welfare (IDH&W), shall file a long-term water quality monitoring and mitigation procedures plan, with comments from the USF&WS, IDF&G, and IDH&W and showing approval by the Forest Service, with the Director, Office of Hydropower Licensing. This plan shall provide for monitoring water quality at all times during project operation, at the same locations and frequency used for the water quality study completed by the licensee and any others deemed necessary by the Forest Service or the Director of Hydropower Licensing. The plan shall prescribe frequency of and periods of time for comparisons between water quality at the project outlet with water quality at the Island Park Reservoir outlet for each water quality parameter being monitored. The plan will provide for the maintenance of existing water quality by ensuring that water quality released from the project outlet will be maintained at the same level as the water quality released from Island Park Reservoir under the normal release patterns and schedules as controlled by the Bureau of Reclamation. It shall prescribe acceptable periods of time within which water quality at the project outlet may differ from water quality at the Reservoir outlet, not to exceed natural fluctuations for comparable time periods and seasons as recorded in the water quality study completed by the licensee. The plan shall prescribe critical water quality limits not to be exceeded during construction or project operations. These limits are as follows:

Until such time as the USF&WS, the IDF&G, the IDH&W and the Forest Service agree that sufficient data is available to predict dissolved oxygen conditions that would occur under continuing release patterns and schedules for the Island Park Reservoir, the dissolved oxygen content of water released by the licensee shall achieve, or exceed, 6(six) milligrams per liter or the levels of saturation which would occur under continuing release patterns and schedules for the Island Park dam as controlled by the Bureau of Reclamation, *whichever is higher.*

Compliance with this provision shall be determined by continuous monitoring and by comparing dissolved oxygen levels at the outlet of the project with levels at the existing outlet for the Island Park dam. Calculated averages from both stations will be reported hourly. For purposes of measuring levels at the existing outlet of Island Park Reservoir, there shall be maintained through said outlet such minimum flows of water as are necessary to replicate oxygenation that would occur if the project were not in operation. For informational purposes, dissolved oxygen levels shall also be monitored at (1) the existing intake for the Island Park Reservoir outlet tunnel and at the intake for the project and (2) at a point approximately 500 feet downstream from the Island Park dam (known as station X4).

In the event of noncompliance with this condition, as prescribed in the mitigation procedures plan, the licensee shall cease or alter operation until conditions would provide water quality within the above-prescribed limits.

During the months of April-October, the temperature of water released through the project shall not be significantly higher than would occur under continuing release patterns and schedules for the Island Park Reservoir as controlled by the Bureau of Reclamation. During the months of November through March, the temperature of water released through the project shall not be significantly lower than would occur under continuing release patterns and schedules for the Island Park Reservoir as controlled by the Bureau of Reclamation; provided, however, that nothing herein shall prohibit the release of water through the project of higher or lower temperature during certain periods where said release has been specifically and jointly approved in advance by memorandum agreement or on a case-by-case basis by the Forest Service, the USF&WS, the IDF&G, and the IDH&W. Compliance with this license condition shall be based on the continuous temperature measurements averaged hourly and shall be determined by comparing water temperatures at the outlet of the project and at the outlet for the Island Park Reservoir. For informational purposes, water temperatures shall also be monitored at the intake for the project and at a point approximately 500 feet downstream from the Island Park dam (known as station X4). As used in this license condition, the terms "significantly higher" and "signifi-

cantly lower" shall be determined through consultation with the Forest Service, the USF&WS, the IDF&G, and the IDH&W, based on the water quality study set forth in article 106 of this license.

In the event of noncompliance with this condition, as prescribed in the mitigation procedures plan, the licensee shall cease or alter operation until conditions would provide water quality within the above-prescribed limits.

Until such time as the USF&WS, the IDF&G, the IDH&W, and the Forest Service agree that sufficient data is available to predict total gas pressure (TGP) conditions that would occur under continuing release patterns and schedules for the Island Park Reservoir, the TGP (as a percent of saturation) released from the project shall be maintained at the same level as the TGP of waters released from Island Park Reservoir under continuing release patterns and schedules for Island Park dam as controlled by the Bureau of Reclamation, but shall not exceed 110 percent of saturation.

In the event of noncompliance with this condition, as prescribed in the mitigation procedures plan, the licensee shall cease or alter operation until conditions would provide water quality within the above-prescribed limits.

During construction, turbidity, as measured in NTU's, shall not exceed 10 percent of the background turbidity, when the background is over 50 NTU's, and shall never exceed an absolute level of 25 NTU's over background. During periods of time when the background turbidity is less than 50 NTU's, the difference from background shall not exceed 5 NTU's over background.

During project operation, turbidity, as measured in NTU's released from the project, shall be maintained at or below the same level of turbidity as that released from Island Park Reservoir under the continuing release patterns and schedules for Island Park dam, as controlled by the Bureau of Reclamation, but not to exceed a difference of 5 NTU's.

In the event of noncompliance with this condition, as prescribed in the mitigation procedures plan, the licensee shall cease or alter operation until conditions would provide water quality within the prescribed limits during project operations.

The monitoring and mitigation procedures plan shall prescribe mitigation measures to be applied should the acceptable periods of deviation or water quality limits be exceeded. In the case of exceedence of critical water quality limits, it shall provide reaction times within which the mitigation measures shall be employed, and shall provide the times within which the mitigation measures are expected to be effective in correcting water quality deficiencies. It shall prescribe actions to be taken if the expected results are not achieved. Prescribed actions, as approved by the Director, Office of Hydropower Licensing, may include cessation of project operations until conditions which would provide water quality within prescribed limits are obtained. The licensee shall suspend all project operations upon notification by the Forest Service or the Director of Hydropower Licensing that operations are not in compliance with provisions of the monitoring and mitigation procedures plan or when operations are not within prescribed critical water quality limits specified in this license condition. A suspension of operations will remain in effect until such time as the Director of the Office of Hydropower Licensing determines that conditions are such that the project can resume operation within provisions of the monitoring and mitigation procedures plan and will be within prescribed critical water quality limits.

Implementation for the monitoring and mitigation procedures plan will be by full-time project operator and automated systems. The full-time operator will be on-site for eight hours a day, seven days a week, and will be on-call 24 hours a day, seven days a week, with a response time of within 30 minutes. Action taken, in accordance with the mitigation procedures plan, shall be facilitated by automated systems to the extent possible. Automated systems will include, but not be limited to, (1) long-term monitoring and reports; (2) tailrace aeration system; (3) project shutdown and flow control or stoppage; and (4) releases from the existing Island Park Reservoir outlet subject to an agreement with the Bureau of Reclamation prior to construction.

The licensee shall maintain fully operational monitoring and mitigation systems at all times during project operations, as specified in the monitoring and mitigation procedures plan. These systems shall be operated, maintained, or renewed as necessary to meet the requirements of this plan and/or to ensure the critical water quality limits specified in this condition are not exceeded.

The licensee shall not commence full operation until after 60 days following the filing date of this plan, unless the Director, Office of Hydropower Licensing, prescribes a different commencement schedule.

Article 108. Within 1 year following the date of issuance of this license and before starting any activities the Forest Service determines to be of a land-disturbing nature on National Forest System land, the licensee shall file with the Director, Office of Hydropower Licensing, a plan approved by the Forest Service for the

control of erosion, stream sedimentation, dust, and soil mass movement.

The licensee shall not commence activities the Forest Service determines to be affected by the plan until after 60 days following the filing date, unless the Director, Office of Hydropower Licensing, prescribes a different commencement schedule.

Article 109. Within 1 year following the date of issuance of this license and before starting any activities the Forest Service determines to be of a land-disturbing nature on National Forest System land, the licensee shall file with the Director, Office of Hydropower Licensing, a plan, approved by the Forest Service, for the treatment and disposal of solid waste and wastewater generated during construction and operation of the project. At a minimum, the plan must address the estimated quantity of solid waste and wastewater generated each day; the location of disposal sites and methods of treatment; implementation schedule; areas available for disposal of wastes; design of facilities; comparisons between on and offsite disposal; and maintenance programs.

The licensee shall not commence activities the Forest Service determines to be affected by the plan until after 60 days following the filing date, unless the Director, Office of Hydropower Licensing, prescribes a different commencement schedule.

Article 110. Within 1 year following the date of issuance of this license and at least 60 days before starting any activities the Forest Service determines to be of a land-disturbing nature on National Forest System land, the licensee shall file with the Director, Office of Hydropower Licensing, a plan approved by the Forest Service for oil and hazardous substances storage and spill prevention and cleanup.

At a minimum, the plan must require the licensee to (1) maintain in the project area, a cache of spill cleanup equipment suitable to contain any spill from the project; (2) to periodically 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 (3) to inform the Forest Service immediately of the nature, time, date, location, and action taken for any spill.

The licensee shall not commence activities the Forest Service determines to be affected by the plan until after 60 days following the filing date, unless the Director, Office of Hydropower Licensing, prescribes a different commencement schedule.

Article 111. Within 1 year following the date of issuance of this license and before starting any activities the Forest Service determines to be of a land-disturbing nature on National Forest System land, the licensee shall file with the Director, Office of Hydropower Licensing, a plan approved by the Forest Service for the storage and/or disposal of excess construction/tunnel spoils and slide material. At a minimum, the plan must address contouring of any storage piles to conform to adjacent land forms and slopes, stabilization and rehabilitation of all spoil sites and borrow pits, and prevention of water contamination by leachate and runoff. The plan also must include an implementation schedule and maintenance program.

The licensee shall not commence activities the Forest Service determines to be affected by the plan until after 60 days following the filing date, unless the Director, Office of Hydropower Licensing, prescribes a different commencement schedule.

Article 112. Within 1 year following the date of issuance of this license and before starting any activities the Forest Service determines to be of a land-disturbing nature on National Forest System land, the licensee shall file with the Director, Office of Hydropower Licensing, a plan approved by the Forest Service for the design and construction of the project facilities in order to preserve or enhance its visual character. The plan must consider facility configurations and alignments, building materials, color, conservation of vegetation, landscaping, and screening. Project facilities of concern to this plan include, among other things, clearings, diversion structures, penstocks, pipes, ditches, powerhouses, other buildings, transmission lines and corridors, and access road.

The licensee shall not commence activities the Forest Service determines to be affected by the plan until after 60 days following the filing date, unless the Director, Office of Hydropower Licensing, prescribes a different commencement schedule.

Article 113. The licensee shall bury the transmission line along the existing 15-kV line (see exhibit G-2). The location and depth of burial of the line are subject to approval by the Forest Service.

Article 114. Road crossings over the penstock must be designed to carry a loaded logging truck.

Article 115. No later than 1 year after issuance of this license, and at least 60 days prior to initiating any project activities, the licensee shall enter into an agreement with the United States Bureau of Reclamation (Reclamation) to coordinate its plans with Reclamation for access to and site activities on lands and property administered by Reclamation so that the authorized purposes, including operation of the federal reservation, are protected. In general, the agreement shall identify the facility, the

applicable study and construction activities, and terms and conditions under which the studies and construction shall be conducted. The agreement shall include, but not be limited to, the following items: (1) reasonable arrangements for access to the federal reservation to conduct studies and construction activities, such access to be conditioned by Reclamation as may be necessary to protect the federally authorized project purposes and operations; (2) charges to be paid by the licensee to Reclamation for (a) technical studies conducted by Reclamation that relate to the structural integrity or operation of the federal reservation associated with hydropower development; (b) review of designs including plans and specifications; (c) construction inspections based on personnel costs, where such reviews and inspections are directly related to the structural integrity or operation of the federal reservation; (d) copies of reports, drawings, and similar data based on printing and mailing costs; and (e) the value of the right of use of land under easements and all associated administrative costs incurred by Reclamation, provided that charges shall not be assessed for information or services that would normally be provided to the public.[5]

Article 116. The design and construction of those facilities that would be an integral part of or could affect the structural integrity or operation of the federal reservation shall be done in consultation with and subject to the review and approval of Reclamation, based on the following schedules. The design drawings shall be approved by Reclamation at 30 percent; 60 percent; and 100 percent completion stages. Two sets of design drawings shall be forwarded at each completion stage to the Regional Director, Bureau of Reclamation. The inspection of construction and its conformity to the Reclamation-approved design drawings shall be conducted by Reclamation at 30 percent; 60 percent; and 100 percent completion stages. Any subsequent changes in the design and construction of the project must be approved by Reclamation prior to implementation.

Article 117. The licensee's construction, operation, and maintenance of the project works and project investigations related to hydropower development, as determined by Reclamation, must not weaken, damage, or affect the structural integrity or operation of the federal reservation or reduce or impair the capability to provide for the purposes and services of the federal reservation and shall be subject to periodic or continuous inspections by Reclamation, as appropriate. Any construction, operation, or maintenance deficiencies or difficulties detected by Reclamation will be immediately reported to the licensee and to the FERC Regional Engineer. Reclamation shall report to the FERC Regional Engineer the need to stop construction, operation, or maintenance while awaiting resolutions of any deficiency or difficulty that would affect the structural integrity of the federal reservation. In those cases when a construction, operation, or maintenance practice or deficiency may result in a situation that would or could endanger the structural integrity, safety, or operational commitment of the federal reservation, Reclamation shall have the authority to stop construction, operation, or maintenance activities until the problem or situation is resolved to the satisfaction for Reclamation. Operation of the powerplant shall be secondary to the operation and maintenance of the federal reservation. No water will be released solely for hydroelectric generation.

Article 118. The licensee shall enter into an operation and maintenance (O&M) agreement with Reclamation of least 60 days prior to commencement of operation of the project. The FERC Regional Engineer shall be invited to attend discussion or negotiation meetings related to the O&M agreement. The O&M agreement shall be subject to revision by the mutual consent of the licensee and Reclamation as experience is gained by actual project operation.

Article 119. All newly disturbed land areas shall be revegetated by the licensee with plant species indigenous to the area within 6 months of completion of project construction.

Article 120. The licensee shall have no claim against the United States arising from any future changes made to meet authorized federal purposes, from the effect of any changes made in releases from or operation of the federal reservation, from modifications resulting from dam safety requirements, or from any changes in reservoir level of the Reclamation project.

Article 121. The licensee shall recognize the primary right of any federal work, either by force account or by contractors or both, associated with the federal reservation, associated facilities, access roads, and the operation and maintenance thereto, whether ongoing at the time of commencement of work by the licensee or initiated subsequent to start of the work by

[5] The charges required by items 2(a) through 2(e) of this article may not be permissible pursuant to section 10(e) of the Act, as amended by ECPA. Article 201 provides what the Commission believes is the vehicle for the United States to be reimbursed for the costs of administrating Part I of the Act, for the use of U.S. lands, and for the use of the federal dam.

the licensee, and to coordinate licensee's work with the federal work.

Article 122. The licensee shall provide the FERC Regional Engineer two copies of all correspondence between the licensee and the Bureau of Reclamation. The FERC Regional Engineer shall not authorize construction of any project work until Reclamation's written approval of construction plans and specifications has been received by the FERC Regional Engineer.

Article 123. The licensee shall review and approve design of contractor-designed cofferdams and deep excavations prior to the start of construction and shall ensure that construction of cofferdams and deep excavations is consistent with the approved design. At least 30 days prior to start of construction of the cofferdam, the licensee shall file with the FERC Regional Engineer and Director, Division of Inspections, and the Regional Director, Bureau of Reclamation, one copy of the approved cofferdam construction drawings and specifications and a copy of the letter(s) of approval.

Article 124. The licensee, within 60 days from the issuance of license, shall contact the Regional Director, Bureau of Reclamation, for coordination of Reclamation conditions.

Article 125. For the purposes of this hydroelectric project, the applicant shall attempt to maintain a reservoir surface water elevation of 6,289 feet. At no time during construction shall the water level elevation go below 6,282 feet. If it is necessary to lower the water level below 6,289 feet, then the applicant must consult with the Idaho Department of Fish and Game on potential impacts to the reservoir fishery and develop an acceptable mitigation plan within two months from the date of issuance of the license. Applicant shall file the mitigation plan with comments from the agencies with the Commission for approval. Project construction shall not commence prior to Commission approval of the mitigation plan.

Article 126. The licensee's operation of the project shall not interfere with the use, storage, or release of water from Island Park Reservoir and shall be subordinate to operating standards currently in effect or as they may be modified in the future by the Bureau of Reclamation.

Article 127. If at any time, additional flows are needed and available in the reservoir to open up feeding areas for trumpeter swans downstream of the project, the applicant will cooperate with the Bureau of Reclamation, U.S. Fish and Wildlife Service, and Idaho Department of Fish and Game to allow additional water through the project area.

Article 128. Licensee shall consult with the Idaho Department of Fish and Game and the U.S. Fish and Wildlife Service on the final design of the intake structure and fish screening and within six months from the date of issuance of this license, file with the Commission for approval, functional design drawings of the fish screening structure for the intake with comments from consulted agencies. Licensee shall file as-built drawings with the Commission within two months after completion of construction. Project construction may not commence prior to Commission approval of the functional design drawings along with the comments of the consulted agencies. The construction commencement date may be extended for completion of this article.

Article 129. Licensee shall consult with the Idaho Department of Fish and Game and the U.S. Fish and Wildlife Service on the final design of the aeration system and within six months from the date of issuance of this license, file with the Commission for approval functional design drawings of the aeration system with comments from consulted agencies.

Within two months of completion of construction, licensee shall file as-built drawings, including comments from the consulted agencies, with the Commission. Project construction may not commence prior to Commission approval of the functional-design drawings, along with the comments of the consulted agencies. The construction commencement date may be extended for completion of this article.

Article 130. Licensee shall, within six months of the issuance of this order and after consultation with the Idaho Department of Health and Welfare, the Idaho Department of Fish and Game and the U.S. Environmental Protection Agency, install continuous total gas and temperature monitoring equipment below the powerhouse return flow. Licensee shall monitor dissolved oxygen and temperature concentrations and maintain records of the monitoring data for a period of 12 months, and shall file with the Idaho Department of Health and Welfare, and Idaho Department of Fish and Game, U.S. Environmental Protection Agency, and the Commission, an annual data summary, filed annually on the anniversary date of issuance of the license, that shall include observed daily minimum, maximum, and average dissolved gas concentrations.

If total dissolved gas is in excess of 110 percent and temperature levels are found higher than normal ambient, the licensee shall immediately consult with the state and federal fish and wildlife agencies and the state water quality agency and take prompt and effective action to correct the deficiency.

Further, if the results contained in any annual report indicate that changes in project structures or operations are necessary to main-

tain a maximum dissolved gas concentration of 110 percent, licensee shall, within two months from the date of annual report submission, file with the Commission for approval, with copies to the agencies consulted, a schedule for implementing the specific changes in project structures or operations that are needed. Documentation of agency consultation on the schedule and specific changes shall be included in the filing.

Article 131. Licensee shall, within six months from the date of issuance of this license, after consultation with the U.S. Fish and Wildlife Service, Idaho Department of Fish and Game, National Marine Fisheries Service, and U.S. Forest Service, and before construction begins, prepare and file with the Commission a plan to control erosion, dust, and slope stability, and to minimize the quantity of sediment or other potential water pollutants resulting from construction and operation of the project, along with the comments from the above agencies on the adequacy of the plan. The plan shall address, among other things, vegetation, grading of slopes, control of surface drainage, measures to contain sediment or minimize the amount of sediment that would be generated in the event of a break in the pipeline/penstock, temporary stockpiling of topsoil, storage and disposal of excess excavation and slide materials, and any construction or upgrading of access roads, including construction access. The plan shall also include: provisions for identifying and mapping any erosive soils and potentially unstable slopes; an implementation schedule; monitoring and maintenance programs for project construction and operation; provisions for periodic review of the plan and for making any necessary revisions to the plan; documentation of consultation with the above agencies during preparation of the plan; and a summary of agency comments and recommendations. In the event that the license does not concur with any agency recommendations, licensee shall provide a discussion of the reasons for not concurring, based on actual-site geological, soil, and groundwater conditions. The Commission reserves the right to direct changes to the plan. Unless the Director, Office of Hydropower Licensing, within two months from the filing date instructs otherwise, the licensee may commence ground disturbing or spoil disposal activities at the project at the end of that period.

Article 132. Transmission lines shall be installed underground.

Article 133. Licensee shall, after consultation with the National Park Service, the U.S. Forest Service, the Bureau of Reclamation and the Idaho Department of Parks and Recreation, prepare and file with the Commission for approval, within 18 months from the date of issuance of this license, a revised Report on Recreational Resources that conforms to the requirements of Commission Regulations, 18 C.F.R. at § 4.41(f)(7). The report shall include, but not be limited to, provisions for development of improved access to the project lands and waters, parking and toilet facilities, including consideration of facilities for the handicapped. Further, the filing shall include a drawing showing the type and location of the facilities to be provided at the project, a construction schedule, an operation and maintenance schedule and/or agreement, and documentation of consultation with the above-named agencies.

(E) This license is also subject to the articles set forth in Form L-2 (October 1975) [reported at 54 FPC 1808], entitled "Terms and Conditions of License for Unconstructed Major Project Affecting Lands of the United States," except article 20, and the following additional articles:

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

a. For the purpose of reimbursing the United States for the cost of administration of Part I of the 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 6,400 horsepower.

b. For the purpose of recompensing the United States for the use, occupancy, and enjoyment of 4.5 acres of its lands 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.

c. For the purpose of recompensing the United States for utilization of surplus water or water power from a government dam, a reasonable amount as determined in accordance with the provisions of the Commission's regulations in effect from time to time.

Article 202. Pursuant to section 10(d) of the Act, after the first 20 years of operation of the project under license, a specified reasonable rate of return on the net investment in the project shall be used for determining surplus earnings of the project for the establishment and maintenance of amortization reserves. One-half of the project surplus earnings, if any, accumulated after the first 20 years of operation under the license, in excess of the specified rate of return per annum on the net investment, shall be set aside in a project amortization reserve account at the end of each fiscal year. To the extent that there is a deficiency of

project earnings below the specified rate of return per annum for any fiscal year after the first 20 years of operation under the license, the amount of that deficiency shall be deducted from the amount of any surplus earnings subsequently accumulated, until absorbed. One-half of the remaining surplus earnings, if any, cumulatively computed, shall be set aside in the project amortization reserve account. The amounts established in the project amortization reserved account shall be maintained until further order of the Commission.

The annual specified reasonable rate of return shall be the sum of the annual weighted costs of long-term debt, preferred stock, and common equity, as defined below. The annual weighted cost for each component of the reasonable rate of return is the product of its capital ratio and cost rate. The annual capital ratio for each component of the rate of return shall be calculated based on an average of 13 monthly balances of amounts, properly includable in the licensee's long-term debt, and proprietary capital accounts, as listed in the Commission's Uniform System of Accounts. The cost rates for long-term debt and preferred stock shall be their respective weighted average costs for the year, and the cost of common equity shall be the interest rate on 10-year government bonds (reported as the Treasury Department's 10-year constant maturity series), computed on the monthly average for the year in question plus four percentage points (400 basis points).

Article 203. The licensee shall clear and keep clear to an adequate width 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 that result from maintenance, operation, or alteration of project works. All clearing of lands and disposal of unnecessary material shall be done with due diligence to the satisfaction of the authorized representative of the Commission and in accordance with appropriate federal, state, and local statutes and regulations.

Article 301. The licensee shall begin construction of project works within 2 years from the issuance date of the license and shall complete construction of the project within 4 years from the issuance date of the license.

Article 302. At least 60 days before the start of construction, the licensee shall submit one copy to the Commission's Regional Director and two copies to the Director, Division of Dam Safety and Inspections, of the final contract drawings and specifications for pertinent features of the project, such as water-retention structures, all necessary transmission facilities, the powerhouse, and water conveyance structures. The Director, Division of Dam Safety and Inspections, may require changes in the plans and specifications to assure a safe and adequate project.

Article 303. Within 90 days of completion of construction, the licensee shall file, for Commission approval, revised exhibits A, F, and G, to describe and show the project as-built, including all facilities determined by the Commission to be necessary and convenient for the transmission of all of the project power to the interconnected system. The requirements of this article are related to articles 116 and 129.

Article 304. Within 30 days after submitting the design drawings to the Bureau of Reclamation (BR), the licensee shall file for Commission approval two sets of design drawings required by article 116. The Commission reserves the right to resolve any disagreement between the licensee and BR about the requirements of article 116.

Article 305. The licensee shall provide the Commission's Regional Director with two copies of the agreement, signed between the licensee and the Bureau of Reclamation (BR) required by article 115. Should the BR fail to reach agreement with the licensee, the matter shall be referred to the Director, Office of Hydropower Licensing, for resolution.

Article 306. The licensee shall provide the Director, Office of Hydropower Licensing, and Regional Director with copies of the signed memorandum of agreement (MOA) required by article 118. Should the BR fail to agree with the licensee on the MOA, the matter shall be referred to the Director, Office of Hydropower Licensing, for resolution.

Article 401. The licensee shall operate the Island Park Dam Project so that all water released downstream in the Henry's Fork River will not contain less than 7 milligrams per liter of dissolved oxygen (DO) or the level of DO as monitored at the dam outlet structure, whichever is higher. The requirements of this article are in addition to the requirements of article 107.

Article 402. The licensee shall operate the Island Park Dam Project so that all water released downstream in the Henry's Fork River will not result in temperatures: (1) lower than 3 degrees celsius (°C) throughout the year; (2) higher than a maximum temperature of 13°C, with a maximum daily average of 9°C from March 1 through June 30 and from October 1 through November 30, and higher than a temperature of 17°C from July 1 through September 30, for the purpose of maintaining state water quality standards and aquatic resources. The requirements of this article are related to article 107.

Article 403. The licensee shall limit the rate of change in river flow (ramping rate) from the Island Park Dam Project to 50 cubic feet per second (cfs) every half-hour upramping and 50 cfs every half-hour downramping during the hours of 7 p.m. to 5 a.m. for the enhancement of fish and wildlife resources in the Henry's Fork River. These rates may be temporarily modified if required by operating emergencies beyond the control of the licensee and for short periods upon mutual agreement with the Idaho Department of Fish and Game (IFG), Bureau of Reclamation (BR) and the Forest Service (FS). The licensee shall develop a ramping rate monitoring plan in cooperation with the BR, FS, IFG, and the U.S. Fish and Wildlife Service, and include the following provisions in the plan: (1) a continuous recording stream gauge to monitor ramping rates; (2) reporting of monthly ramping records to the aforementioned agencies; and (3) reporting of yearly records to the regional engineer and the Commission. The licensee must file the plan for Commission approval along with all agency comments and correspondence at least 90 days prior to project operation.

Article 404. The Commission, upon its own motion or upon the recommendation of federal or state fish and wildlife agencies or affected Indian Tribes, reserves the authority to order alterations of project structures and operations to take into account, to the fullest extent practicable, the regional fish and wildlife program developed and amended under the Pacific Northwest Electric Power Conservation Act.

Article 405. The licensee, before beginning any land-clearing or land-disturbing activities within the project boundaries, other than that specifically authorized in this license, shall consult the Idaho State Historic Preservation Officer (SHPO), the Forest Service, (FS), and Bureau of Reclamation, Pacific Northwest Region (BR). If the licensee discover previously unidentified archeological or historic properties during the course of constructing or developing project works or other facilities at the project, the licensee shall stop all land-clearing and land-disturbing activities in the vicinity of the properties and consult with the SHPO, the FS, and the BR. In either instance, the licensee shall file with the Commission a cultural resource management plan prepared by a qualified cultural resource specialist after having consulted with SHPO, FS, and BR.

The management plan shall include at least the following components: (1) a description of each discovered property, indicating, whether it is listed on or eligible to be listed on the *National Register of Historic Places*; (2) a description of the potential affect on each discovered property; (3) proposed measures for avoiding or mitigating effects; (4) documentation of the nature and extent of consultation; and (5) a schedule for mitigating effects and conducting additional studies. The Commission may require changes to the plan.

Before beginning to excavate or remove any archeological resource located on National Forest System and/or BR lands, the licensee shall secure a permit from the FS and/or the BR authorizing such excavation or removal. The licensee shall not begin land-clearing or land-disturbing activities, other than those specifically authorized in this license, or resume such activities in the vicinity of a property discovered during construction, until informed that the requirements of this article have been fulfilled.

Article 406. The licensee, after consultation with the Forest Service (FS), the Bureau of Reclamation (BR), and the Idaho Department of Parks and Recreation, and before project construction shall schedule all construction activities after Labor Day through May 15, in order to avoid the peak recreational season.

Article 407. The licensee, after consultation with the Forest Service, the Bureau of Reclamation and the Idaho Department of Parks and Recreation and before beginning project operation or construction shall replace and maintain portions of the Brimstone cross-county ski trail that would be disturbed by project construction or operation. Further, the licensee shall file with the Commission, within 90 days of completing the trail, as-built drawings showing the location of the trail and documentation of agency consultation. The licensee, except during emergencies, shall use snowmobiles or cross-county skis to operate and maintain project facilities during the winter months.

Article 408. (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 also shall have continuing responsibility to supervise and control the use and occupancies for which it grants permission and to monitor the use of and to ensure compliance with the covenants of the instrument of conveyance for any interests that it conveys under this article. If a permitted use and occupancy violates any condition of this article or any other condition imposed by the licensee for the 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, that action includes, if necessary, cancelling the permission to use and occupy the project lands and waters and requiring the removal of any noncomplying structures and facilities.

(b) The types 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) noncommercial piers, landings, boat docks, or similar structures and facilities that can accommodate no more than 10 watercraft at a time and where the facility is intended to serve single-family type dwellings; and (3) embankments, bulkheads, retaining walls, or similar structures for erosion control to protect the existing shoreline. 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 also shall ensure to the satisfaction of the Commission's authorized representative that 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 among other things, may establish a program for issuing permits for the specified types of use and occupancy of project lands and waters that 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 and roads for which 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) nonproject 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 1 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) nonproject overhead electric transmission lines that requiring 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 from any other private or public marina; (6) recreational development consistent with an approved exhibit R or an 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 5 acres or less; (ii) all of the land conveyed is located at least 75 feet, measured horizontally, from the edge of the project reservoir at normal maximum 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 45 days before conveying any interest in project lands under this paragraph (d), the licensee must submit a letter to the Director of the Office of Hydropower Licensing, stating the licensee's 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 appropriate federal and state fish and wildlife or recreational agencies and with 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 an approved report on recreational resources of an exhibit E or if the project does not have an approved exhibit R or an approved report on recreational resources, that the lands to be conveyed do not have recreational value.

(3) The instrument of conveyance shall include covenants running with the land adequate to ensure that: (i) the use of the lands conveyed shall not endanger health, create a nuisance, or otherwise be incompatible with overall project recreational use; and (ii) the grantee shall take all reasonable precautions to ensure that the construction, operation, and maintenance of structures or facilities on the conveyed lands occur in a manner that protects the scenic, recreational, and environmental values of the project.

(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 shall be excluded from the project only on 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 the preservation of 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 are filed for approval for other purposes.

(g) The authority granted to the licensee under this article shall not apply to any part of the public lands and reservations of the United States included within the project boundary.

(F) 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 Commission filing. Proof of service on these entities must accompany the filing with the Commission.

(G) The application for preliminary permit for Project No. 9366-000 filed by Rocky Mountain Hydro, Inc. is dismissed with prejudice.

(H) This order is issued under authority delegated to the Director and is final unless appealed to the Commission by any party within 30 days from the issuance date of this order. Filing an appeal does not stay the effective date of this order or any date specified in this order. The licensee's failure to appeal this order shall constitute acceptance of the license.

Environmental Assessment

Federal Energy Regulatory Commission

Office of Hydropower Licensing, Division of Project Review

Island Park Dam Project

FERC Project No. 2973-004—Idaho

September 29, 1988

I. Application

On July 1, 1985, the Fall River Rural Electric Cooperative, Inc. (Fall River) applied for a license for the proposed Island Park Dam Project, a major hydroelectric project of 5 megawatts (MW) or less. Fall River supplemented their application on January 13, and October 14, 1986, and January 19, February 17, February 21, and March 3, 1987. The proposed project would be located on federal land, in the Targhee National Forest, and at Island Park reservoir dam (Island Park dam) on the Henry's Fork, in Fremont County, Idaho (Figures 1 and 2). The Targhee National Forest is administered by the Forest Service (FS) and Island Park dam is operated by the Bureau of Reclamation (BR).

II. Purpose and Need for Action

A. Purpose

The proposed project would provide an estimated average of 11,800,000 kilowatthours (kWh) of electrical energy per year to Fall River's system.

B. Need for Power

Fall River is the only electric utility serving the area that is conveniently located to provide electric transmission and distribution. In 1986, Fall River's distribution system experienced a peak demand of 52 MW. Fall River forecasts

an average annual growth rate in peak demand of approximately 2 percent. The capacity and energy required to supply Fall River's customers are presently being purchased from the Bonneville Power Administration (BPA).

The proposed project would be useful to Fall River and its customers for the following reasons.

(1) The project would not reduce Fall River's reliance on purchased power, but would eliminate uncertainty about the availability and cost of that portion of the cooperative's future power supply that could be produced by the project.

(2) The proximity of the project to Fall River's service area gives the cooperative an opportunity for convenient, effective operation and control of an independent, reliable power supply that would give customers in its service area a lower rate, and a more reliable electric power supply.

(3) The proximity of the project to Fall River's isolated service area makes the service area the logical market for the project power, and makes the project more valuable to Fall River than to other applicants with more remote markets.

III. Proposed Project and Alternatives

A. Proposed Project

1. Project Description

The Island Park dam is a 9,448-foot-long, earthfill structure with a maximum height of 91 feet, and a concrete spillway at crest elevation 6,309 feet above mean sea level (m.s.l.) that joins the outlet tunnel at the bottom of the dam. The dam outlet structure is at 6,230 feet m.s.l. inside the reservoir and is composed of the following components: (1) an intake structure with trashracks and screens; (2) a 12-foot-diameter, concrete, circular intake tunnel 238 feet long; (3) a gate chamber, 75 feet long, at the confluence of the spillway; and (4) a 13-foot-diameter, concrete, circular tunnel, 500 feet long, with a 3,400 cubic foot per second (cfs) capacity, discharging into the Henry's Fork southwest of the dam and opposite the proposed project location.

Fall River would build a reinforced concrete powerhouse containing two vertical Francis turbines with a combined installed capacity of 4.8 MW southeast of the dam on Henry's Fork. Fall River would also construct the following: (1) a 24.9-kilovolt (kV) buried transmission cable, 15,000 feet long, which would connect with Fall River's existing 48-kV line; (2) a water intake with four interconnected 6-foot-diameter by 25-foot-long "well screened" cylinders at elevation 6,245 to 6,230 m.s.l. on the reservoir bottom; (3) a 10-foot-diameter siphon penstock, 700 feet long, over and into the dam; and (4) an aeration facility (figures 2 through 5).

2. Proposed Mitigative Measures

a. Fishery Resources

The proposed intake siphon is designed to use a 3/8-inch Johnson-type well screen, would have velocities of 1-foot per second (fps) or less at the screen to prevent fish entrainment, and would be located on the bottom of the reservoir to withdraw water during all seasons with temperatures that are beneficial to trout growth in the downstream Henry's Fork fishery.

b. Water Resources

Fall River proposes to prevent increased sediment deposit in the Henry's Fork River by using cofferdams around the site during construction of the powerhouse and excavation for the tailrace. After placement of the penstock in the embankment section of the dam, Fall River proposes to reestablish the design slopes of the embankment. Additionally, Fall River would construct an aeration facility downstream from the turbine outlet and would also use turbine venting to increase dissolved oxygen (DO) in the water to meet state standards and to protect aquatic life.

c. Visual Resources

The siphon intake would be located at the bottom of the reservoir, and the penstock would be routed to the existing dam embankment, where it would be buried. The area disturbed by construction of the penstock would be shaped and covered with the native materials removed from the site to make it blend into the existing surroundings. Penstock construction has been planned, as much as possible, along existing roadways and along areas of construction activity.

Power lines constructed in conjunction with the project would be buried, and would be constructed, whenever possible, along existing roadways and along the dam (figure 2). The area disturbed by construction would be kept to a minimum and reseeded as soon after construction as possible but in no event later than the same season in which construction takes place.

The powerhouse and associated transformer pad would be constructed at the base of the dam in an area previously disturbed by construction activity. The powerhouse would be constructed with horizontal wood siding, in keeping with FS building practices in the area. The color of the building would be an earth tone to blend with the surrounding area. The roof of the structure would be a cedar shake roof that also would be an earth tone. A multi-level roof line would be featured on the powerhouse to help it blend the surrounding area.

Plantings would be utilized to screen the transformer platform and the powerhouse. The area between the powerhouse and the existing pool, featuring a 16-foot-wide 200-foot-long fisherman access walkway, would be fenced with a natural wood railing.

d. Recreation Resources

Fall River proposes to do the following: (1) construct the proposed penstock, powerhouse, and underground transmission line after the prime recreation season to minimize disturbance to fishermen using the area immediately below the dam; (2) improve public access to the Henry's Fork by upgrading the Box Canyon boat launch area and by providing fishing trails along Henry's Fork; and (3) limit winter access for project maintenance to snowmobiles to avoid conflict with cross-country skiers using the Brimstone trails.

3. Federal Land Management Conditions

Under section 4(e) of the Federal Power Act the BR has provided conditions for the proposed project in letters dated December 30, 1985, and September 25, 1986 (attachment 1). In summary, these conditions require Fall River to take the following actions:

(1) enter into an agreement with the BR for access and charges;

(2) provide all project designs for BR approval during various stages of construction and for any project changes after construction;

(3) make the project compatible with BR project purposes, provide for BR inspections, and provide BR authority to stop construction and operate the project as secondary to operation of the BR project;

(4) enter into an operation and maintenance agreement with BR;

(5) revegetate disturbed areas within 6 months of project construction;

(6) have no claim against future BR project operation changes;

(7) recognize project work as secondary to any BR project work and coordinate any work with BR prior to commencement;

(8) coordinate all work with BR for approval prior to Commission approval;

(9) obtain BR approval of all cofferdam construction drawings;

(10) coordinate with the BR Regional Director within 60 days of license issuance;

(11) maintain the reservoir water elevation at 6,289 feet m.s.l. and draw down the reservoir no lower than elevation 6,289 feet m.s.l. only after coordination with the Idaho Department of Fish and Game (IFG) and after the filing of a mitigation plan for Commission approval;

(12) ensure that project operation would not interfere with BR use, storage, or release of water from the dam and be subordinate to current BR operation or future BR operation;

(13) provide any additional water releases to Henry's Fork requested by BR, the U.S. Fish and Wildlife Service (FWS), or IFG;

(14) consult with FWS and IFG on the final fish screen design and, within 6 months of license issuance file coordinated drawings with agency comments with the Commission, and within 2 months after the completion of construction file as-built drawings with the Commission;

(15) consult with FWS and IFG on final design of any aeration system and within 6 months of license issuance, file for Commission approval functional design drawings along with agency comments and, within 2 months of construction completion, file as-built drawings with the Commission;

(16) within 6 months of license issuance and after consultation with the IFG, Idaho Department of Health and the Welfare (DHW), and Environmental Protection Agency (EPA), submit a water quality monitoring plan to measure total dissolved gases, DO, and temperature in Henry's Fork below the powerhouse and include remedial action to correct any water quality problems;

(17) consult with the BR, FWS, IFG, FS, and the National Marine Fisheries Service (NMFS) and provide an erosion control plan for Commission approval within 6 months from the license issuance date;

(18) bury the transmission line; and

(19) within 18 months from license issuance, consult with the National Park Service (NPS), FWS, BR, and the Idaho Department of Parks and Recreation (DPR) and file a recreation report for Commission approval.

FS has also provided conditions for the proposed project by letter dated February 23, 1988, under section 4(e) of the Federal Power Act (attachment 2). These conditions require Fall River to take the following action:

(1) within 6 months of license issuance file for a special use authorization enforceable by the FS;

(2) obtain FS approval of all final designs;

(3) obtain FS approval of any design changes after project construction starts;

(4) each year consult with the FS on protecting and developing natural resources and provide a report of this consultation to the Commission;

(5) develop a recreation mitigation plan in cooperation with the FS and file this plan with the Commission within 1 year of license issu-

ance and prior to any land-disturbing activities;

(6) prepare a water study plan in cooperation with the FS, FWS, IFG, and DHW and file the plan with the Commission for approval prior to operation;

(7) consult with the FS, FWS, IFG, and DHW to develop a water quality monitoring plan that would assess project impacts, provide remedial measures to correct any water quality problems identified, provide a full-time operator and automated operation, and file the plan with the Commission at least 60 days prior to operation;

(8) develop an erosion control plan with FS approval prior to construction and file this plan and consultation with the Commission within 1 year from project issuance;

(9) consult with FS to develop a solid waste and water management plan, and file the plan and consultation with the Commission prior to land-disturbing activities and within 1 year of license issuance;

(10) consult with FS to develop an oil and hazardous substance storage and spill prevention plan, and file the plan and consultation with the Commission prior to any land-disturbing activities and within 1 year of license issuance;

(11) consult with FS and develop an excavated material storage plan, and file the plan and consultation with the Commission prior to land-disturbing activities and within 1 year of license issuance;

(12) consult with FS to develop an aesthetics plan and provide the plan and consultation to the Commission for approval before land disturbance and within 1 year from license issuance;

(13) consult with FS on transmission line burial along the existing 15-kV transmission line; and

(14) design the crossing over the penstock to support a logging truck.

B. Alternatives To The Proposed Project

The only alternative to the proposed action would be denial of license. Denial of license would also mean that the benefits specific to Fall River and their service area would be lost. These specific benefits are identified in the "Need for Power" section of this document. Additionally, if the project is not developed, the potential renewable hydraulic energy of this resource would be lost and might eventually have to be generated from non-renewable primary energy resources.

C. Alternative of No Action

No action would mean that the potential hydropower of the proposed project would not be produced; there would be no construction and no alteration of the existing environment.

IV. Consultation and Compliance

A. Agency Consultation

The Commission's regulations require prospective applicants to consult with the appropriate resource agencies before filing the application for license. This constitutes an initial step in compliance with the Fish and Wildlife Coordination Act, the Endangered Species Act, the National Historic Preservation Act, and other federal statutes. Prefiling consultation must be complete and must be documented in accordance with the Commission's regulations.

After the Commission accepts the application, concerned entities may submit formal comments during notice period. In addition, organizations and individuals may petition to intervene and to become a party to any subsequent proceedings. The comments provided by concerned entities are made part of the record and are considered during the review of the proposed project. After the Commission issued a public notice of the application on October 23, 1985, the following entities commented on the application or petitioned to intervene.

Commenting Entity	*Date of Letter*
Forest Service	December 20, 1985
	December 10, 1985
	March 4, 1987
	August 8, 1987
	February 23, 1988.
Department of the Interior	December 30, 1985
	September 25, 1986
	November 12, 1986

Intervenors	*Date of Petition*
Henry's Fork Foundation, Inc.	December 6, 1985
Idaho Department of Water Resources and Water Resource Board	December 13, 1985
Greater Yellowstone Coalition	December 13, 1985
Fremont-Madison Irrigation District	December 18, 1985

Commenting Entity	*Date of Letter*
Idaho Department of Fish and Game	December 19, 1985
Department of the Interior	January 8, 1986

Fall River responded to Interior's comments in letters dated February 25 and November 24, 1986.

B. Water Quality Certification

Fall River applied for a water quality certificate on June 3, 1985. In a letter dated February 7, 1986, DWH issued a water quality certificate to Fall River under authority of section 401 of the Clean Water Act. The certificate contained no conditions.

C. Electric Consumers Protection Act

Conservation provisions for Henry's Fork are found in the Electric Consumers Protection Act of 1986 (ECPA), section 15A, miscellaneous provisions. These provisions state "the Commission may issue such a license only if the Commission determines that significant and permanent alteration of streamflow, habitat, water temperature, and quality will not occur as a result of the project." These conservation provisions are included in ECPA to protect the existing trout fishery and other natural resources of the Henry's Fork. In addition, section 15A takes precedence over section 3(2) of ECPA that states "the Commission, in addition to the power and development purposes for which licenses are issued, shall give equal consideration to the purposes of energy conservation, the protection, mitigation of damage to, and enhancement of, fish and wildlife (including related spawing grounds and habitat), the protection of recreational opportunities, and the preservation of other aspects of environmental quality." Licensing the project and implementing the mitigative recommendations of Fall River, the agencies, and staff would comply with ECPA requirements.

D. Pacific Northwest Power Planning and Conservation Act

Under section 4(h) of the Pacific Northwest Power Planning and Conservation Act, the Northwest Power Planning Council (Council) developed the Columbia River Basin Fish and Wildlife Program (Program) to protect, mitigate, and enhance fish and wildlife resources associated with development and operation of hydroelectric projects within the Columbia River Basin. Section 4(h) states that responsible federal agencies should provide equitable treatment for fish and wildlife resources in addition to the other purposes for which hydropower is developed. Section 4(h) further states that these agencies shall take into account, to the fullest extent practicable, the Program adopted under the Act.

The Program directs agencies to consult with federal and state fish and wildlife agencies, appropriate Indian Tribes, and the Council during the study, design, construction, and operation of any hydroelectric development in the basin. At the time the application was filed, the Commission's regulations required applicants to initiate prefiling consultation with the appropriate federal and state fish and wildlife agencies and the Tribes, and provide these groups with post filing opportunities to review and to comment on the application. This consultation process has occurred.

The program states that authorization for new hydroelectric projects should include conditions of development that would mitigate the impacts of the project on fish and wildlife resources. The relevant federal and state fish and wildlife agencies have reviewed and commented on the application. In addition, any license issued would provide for mitigative measures to protect fish and wildlife resources and therefore, is consistent with section 1200 of the Program. Further, a condition of any license issued would reserve to the Commission the authority to require future alterations in project structures and operation in order to take into account, to the fullest extent practicable, the applicable provisions of the Program.

V. Environmental Analysis

A. General Description of the Locale

1. The Upper Henry's Fork River Basin

The Island Park dam and reservoir are in the Upper Henry's Fork River Basin, which is located in the Continental Divide Mountains at elevation 6,300 feet m.s.l., approximately 39 miles north of the city of Ashton, Idaho, and about 15 miles west of Yellowstone National Park (figure 1). The project area is located on the rim of an inactive collapsed volcano called the Island Park Caldera (figure 1). The project area varies from forested mountains to rolling hills and some areas vegetated with low shrubs. All the project area is part of the Targhee National Forest. Land use adjacent to the project area is rural. Timber production, rangeland, and irrigated cropland are the basic components of the area's agriculture. Annual precipitation varies from 15 inches in lower elevations to 40 inches in higher elevations. Seventy percent of the precipitation occurs between November and May, mainly in the form of snow (Bingham Engineering, 1985).

2. Cumulative Environmental Impact Analysis

The staff analyzed the potential cumulative environmental effects of the Island Park Dam

Project in an environmental assessment for the Cross-Cut Project (FERC Project No. 3991) issued on February 28, 1986, by the Commission. The staff concluded that the Island Park Dam Project would have no significant adverse cumulative impacts on the environment, including the following target resources: resident trout, water quality, bald eagles, and trumpeter swans.

B. Proposed Project

1. Geology and Soils

Affected Environment: The project area is underlain by basalt and welded, rhyolite tuff bedrock. A portion of the new penstock would be buried in the existing engineered granular section of the existing earthen dam embankment. The remaining section of the penstock and the powerhouse would be constructed in basalt and welded tuff overlain by a thin layer of poorly consolidated colluvial and alluvial deposits. These deposits consist primarily of gravel, cobbles, and blocks of basalt and welded tuff in a silty soil matrix, with some silt, clay, and gravel stream deposits (Bingham Engineering, 1985). Fall River states that the project area slopes are stable and not prone to erosion (Bingham Engineering, 1985).

Environmental Impacts and Recommendations: Due to the small area of land disturbance, erosion and sedimentation that would occur during project construction would be minor and localized. Temporary erosion and sedimentation would occur primarily during cofferdam placement and removal, burial of the penstock, and disposal of excess spoil materials. Fall River's proposed use of cofferdams to isolate the excavations for the powerhouse and tailrace from the river would prevent large amounts of sediment from entering the river. Other measures proposed by Fall River include: (1) diversions from excavated areas; (2) hay bales; (3) turbidity screens in the water; (4) revegetation of excavated areas; and (5) working during the low-flow period.

IFG, in its motion to intervene, recommends that it approve detailed plans for road location, construction scheduling, soil erosion control, topsoil stockpiling, disposal of excess excavated spoil, and revegetation of all disturbed sites. The BR's and FS's section 4(e) conditions would require Fall River, prior to starting any project-related, land-disturbing activities, to file a plan for control of erosion, stream sedimentation, dust, and soil mass movement that includes the measures recommended by IFG. The FS and BR section 4(e) requirements to control erosion and sedimentation include the following measures:

(1) revegetating disturbed areas within 6 months of completion of project construction;

(2) grading slopes to stabilize the site;

(3) controlling of surface drainage;

(4) providing sediment control during a penstock break;

(5) stockpiling of topsoil;

(6) storage and disposal of slide and excavated material;

(7) construction or upgrading of access roads;

(8) identification and mapping of erosive soils or unstable slopes;

(9) an implementation schedule;

(10) monitoring and maintenance programs;

(11) provisions of periodic review or the plan and revisions in the plan;

(12) documentation of agency consultation;

(13) summary of agency comments and recommendations on the plan;

(14) removal of solid waste and waste water;

(15) hazardous substance storage, spill clean up, and spill prevention; and

(16) the rehabilitation of all spoil sites (*see* attachment A, condition nos. 5 and 17, and attachment B, condition nos. 8, 9, 10, and 11).

The erosion and sediment control measures proposed by the the applicant and recommended by the agencies are general descriptions of the types of control measures that would be used. In order to ensure that project-related erosion and sedimentation would be kept to minor levels, a detailed plan that includes the applicant's proposed measures, the measures recommended by the FS and BR, and the actual locations of the specific control measures to be used, should be filed with the Commission prior to commencing any ground-disturbing activities; such a plan is specifically required by BR section 4(e), condition no. 17.

Unavoidable Adverse Impacts: During construction some minor, localized short-term erosion and sedimentation losses would be unavoidable. There would be no long-term erosion or sedimentation losses from project construction or operation, once the disturbed land surfaces have been stabilized and vegetated.

2. Water Resources

Affected Environment: The flow regime of Henry's Fork has been greatly altered since 1938 by construction of the Island Park dam to meet local mid-summer irrigation needs. The runoff pattern for Henry's Fork and its tributaries is typical for a snowmelt-fed river providing greater flows in late spring and early summer, decreasing flows later in summer and fall, and much lower flows in late fall and early winter. Flows from the dam, however, are much different due to regulation with storage occurring in fall and winter, overflow releases in spring, and large releases in July and August

for downstream irrigation needs. During the period of record (1940 through 1979) daily flows have varied from 2 to 2,500 cfs. Average monthly flows (table 1) are highest May through August and lowest November through March (Bingham Engineering, 1985).

Table 1. Average monthly flows for The Henry's Fork River downstream from the Island Park dam for 1940 through 1979 and the estimated percentage of these flows that could be diverted through the proposed Island Park Dam Project, FERC Project No. 2973, Idaho (Source: the staff).

Month	*Average monthly flow release in cubic feet per second*	*Estimated percentage of flow that could be diverted through the project*
October	480	100
November	308	100
December	239	100
January	187	100
February	255	100
March	320	100
April	494	100
May	978	98
June	966	99
July	1,154	83
August	1,189	81
September	818	100

The Island Park reservoir is eutrophic (nutrient enriched) and varies from good to poor in water quality (Ecosystems, 1988). According to Idaho State Water Quality Standards, the reservoir is designated for use for domestic water supply, agricultural water supply, coldwater biota, salmonid spawning, primary contact recreation, and special resource water.

Fall River's temperature and DO sampling from 1985 to 1987 shows that the Island Park Dam reservoir is chemically and thermally stratified; the reservoir water quality varies from good to poor depending on the season and water depth. During late September and early October, the reservoir water fully mixes, resulting in fairly uniform temperatures and DO for a short period of time. On October 3, 1985, the reservoir water mixing was verified and measured at 6 degrees celsius (°C) and DO levels ranged from 8.5 to 10.2 milligrams per liter (mg/l) (Ecosystems, 1988). On October 26, 1986, the reservoir water mixing was also verified and measured at 8°C and DO levels ranged from 8.6 to 9 mg/1 (Ecosystems, 1988).

During reservoir refilling from fall through winter, the reservoir becomes thermally stratified, ice forms on the surface, and the upper water level from the surface to 12 feet below the surface becomes colder and contains more DO than the bottom, 44 to 46 feet below the surface where the existing dam outlet and proposed project intake are located. During this time, studies show that in the upper level water temperature ranged from 0 to 2.5°C, and DO levels ranged from 7.5 to 12.5 mg/l, and in the bottom level water temperature ranged from 2.3 to 3.2°C and DO levels ranged from 2.1 to 5.9 mg/l (Ecosystems, 1988). This reservoir thermal stratification briefly ends with another full water mixing in the early spring.

After turnover when the reservoir has refilled, from spring through summer and into early fall, the reservoir is thermally stratified. The upper level is warmer and DO is higher than the bottom level. During this time, studies show that in the upper level water temperatures ranged from 11.5 to 21.5°C and DO levels ranged from 4.8 to 9.2 mg/l, and in the lower level water temperatures ranged from 9 to 17.5°C and the DO was 2.9 to 6.9 mg/l (Ecosystems, 1988).

Fall River's water quality monitoring at the existing outlet from 1985 to 1987 shows that flow releases to the Henry's Fork have excellent DO and excellent to poor temperatures for fish spawning (Piper *et al.*, 1982; Bardach *et al.*, 1973; Davis, 1975; Brungs and Jones, 1977; Hokanson, 1977; EPA, 1986). From spring through early fall, temperatures of Henry's Fork ranged from 6.5 to 17°C and DO levels ranged from 7.5 to 10.2 mg/l, resulting in DO saturation of 95 to 133 percent. During the October 13, 1986, reservoir turnover, the temperature of Henry's Fork was 8°C and the DO level was 9.7 mg/l or 102 percent of saturation. From fall through winter, the temperature of Henry's Fork ranged from 3 to 5°C and DO levels ranged from 8.8 to 11.5 mg/l or 82 to 107 percent of saturation. Fall River's monitoring also shows that the existing dam outlet greatly aerates flow releases to Henry's Fork, which allows flows to meet the state DO standard of 6 mg/1.

The 1985 to 1987 monitoring of Henry's Fork shows that temperatures of the flow releases ranged from 3 to 17°C and DO levels ranged from 7.5 to 11.5 mg/l or 82 to 113 percent of

saturation (Ecosystems, 1988). The downstream river temperature measured is similar to the lower reservoir level water temperature, where the existing dam outlet structure is located, with the exception of the spring temperatures when warmer reservoir surface water flows over the spillway. The low level intake draws water low in DO ranging from 2.1 to 6.9 mg/l. The high DO levels measured downstream ranging from 6.8 to 10.6 mg/l, however, are attributed to the tremendous aeration provided by the dam outlet structure (Ecosystems, 1988). The flow releases currently provide DO year-round and temperatures most of the year that are beneficial and sometimes optimum for the salmonids and other types of fish found in Henry's Fork (Piper *et al.*, 1982; Bardach *et al.*, 1973; Davis, 1975; Brungs and Jones, 1977; Hokanson, 1977; EPA, 1988), except during May and June. During these 2 months, surface overflow spillage results in temperatures too warm for salmonid spawning and violates the state standard, which is a daily average of no more than 9°C and a maximum of 13°C. These overflows also violate the state standard for total dissolved gases, which is a maximum limit of 110 percent of saturation.

Environmental Impacts and Recommendations:

a. Sedimentation and Turbidity

Erosion from disturbed areas in the dam adjacent to the reservoir and in land adjacent to the Henry's Fork would introduce some sediment into the water column. Fine-sized clay and silty sediment would enter the reservoir and Henry's Fork. This sediment would settle to deeper areas of the reservoir and some would be carried downstream and settle in riffles and deep pools.

Increases in turbidity and sedimentation, with their negative effects on aquatic resources, are among the most significant construction-related effects of hydropower development (Rochester *et al.*, 1984). Because sedimentation resulting from project construction would be minor (section V. B.1), associated impacts on aquatic resources are expected to be minor and temporary. Fall River's application of good erosion prevention techniques, such as sediment traps, hay bales, revegetation, diversions away from excavated areas, turbidity screens in the water, and working in the fall low-flow period, along with agency section 4(e) requirements (section V.B.1.), should greatly reduce construction-related sediment problems. To prevent the introduction of sediment into the water column, Fall River proposes constructing the project when the reservoir is drawn down during the winter low-flow period and to implement an erosion control and sedimentation plan developed after consultation with interested agencies.

Fall River should consult with FS, BR, FWS, and IFG to develop a detailed erosion control and sedimentation plan, as discussed in section V.B.1, Geology and Soils. The plans required by Interior's and FS's section 4(e) conditions and recommended by staff would adequately protect resources from sedimentation impacts (*see* section V.B.1.).

b. Reservoir drawdown

A lower reservoir drawdown required for siphon water intake construction in the dry as compared to the existing drawdown limits could affect reservoir water quality by increasing erosion and sedimentation and could affect the quantity of winter flow releases after construction because of proposed reservoir refilling. FS, BR, FWS, IFG, DWR, the Idaho Department of Water Resources (IWR), the Henry's Fork Foundation (HFF), and the Greater Yellowstone Coalition (GYC) are concerned that prolonged drawdowns lower than existing drawdown elevation limits for project intake and siphon penstock construction would affect the fish and wildlife resources in the Henry's Fork by reducing winter flows.

Fall River would limit any within-reservoir construction to the current BR reservoir drawdown schedule and limit reservoir drawdown to an elevation of 6,289 feet m.s.l. A lower drawdown level for any extended period of time is not necessary, because the project intake would be constructed on the water surface and installed by divers underwater. This type of construction is required by BR's and FS's section 4(e) conditions on drawdown elevation limits for construction. Staff, therefore, concludes that project intake and siphon construction would not adversely affect reservoir water quality or downstream fish and wildlife resources by increasing drawdown levels or by reducing winter flows.

c. Dissolved Oxygen and Total Dissolved Gases

Project operation could result in a reduction of DO levels downstream of the dam. The proposed project operation would draw water from near the bottom of the reservoir, which is low in DO; releases would require substantial aeration to meet state standards for DO which is 6 mg/l. Fall River proposes aerating these flows using turbine venting and an experimental design aeration facility engineered to provide up to 12,000 kilograms per day of oxygen (Ecosystems, 1988). The aeration facility, however, could raise DO, nitrogen, and other dissolved gases to levels exceeding the state standard of 110 percent of saturation (Ecosystems, 1988). The proposed project would have an operating capacity of 138 to 960 cfs, which would divert

an estimated 81 to 100 percent of the monthly flows containing water high in DO that is currently released from the existing dam outlet (table 1).

FS, BR, FWS, IFG, HFF, and the GYC are concerned that the project flows would degrade the DO concentration or increase total dissolved gases over 110 percent of saturation in the Henry's Fork. FS section 4(e) conditions requires the following of Fall River: (1) establish a water quality baseline by monitoring the reservoir and Henry's Fork; (2) mitigate any potential water quality problems the project would cause; (3) maintain the existing water quality found in the flow releases to Henry's Fork; and (4) install an automated system and employ an on-site operator to maintain the existing water conditions such as DO, other gases, and temperature. Fall River has started monitoring the reservoir and Henry's Fork for baseline water quality, and has changed plans to now include an aeration facility.

BR section 4(e) conditions require the following of Fall River: (1) consult with IFG and FWS on final design for the proposed aeration system and file all consultation and the plan with the Commission for approval; and (2) consult with DHW, IFG, and EPA on developing a water quality monitoring plan that includes DO, TDG, temperature, annual reporting, and remedial action to correct total dissolved gas concentrations above 110 percent of saturation and temperatures above the existing level at the dam outlet, (3) provide for changing project structures and operation should monitoring show that the project is not maintaining a maximum dissolved gas concentration of 110 percent of saturation, and (4) file the plan and all consultation with the Commission for approval.

IFG has recommended monitoring DO and temperature before project construction and duplicating these pre-project DO concentrations and water temperatures during project operation. Fall River has started water quality monitoring and proposes to raise the powerhouse discharge flows to the highest quality level possible to meet these recommendations.

IFG recommended and the FS section 4(e) conditions would set an interim DO lower limit of 6 mg/l (the state standard) or the DO levels at the existing dam outlet, whichever is higher, which would be determined by future continuous monitoring. Fall River's monitoring to date, however, has shown that DO concentrations at the outlet ranged from 6.8 to 10.6 mg/l and averaged 7.3 mg/l and the percent of saturation averaged 96.4 (Ecosystems, 1988). Increasing the minimum DO limit to 7 mg/l or the DO level at the dam outlet, whichever is higher, would slightly enhance the downstream fishery and aquatic life by increasing DO and would protect fisheries and aquatic life dependent on these DO levels (Piper *et al.*, 1982; Bardach *et al.*, 1973; Davis, 1975; Brungs and Jones, 1977; Hokanson, 1977; EPA, 1988). This DO level better duplicates existing conditions than the FS section 4(e) conditions and would prevent DO levels from falling below 7 mg/l in the Henry's Fork.

Should Fall River not meet the 7 mg/l minimum DO limit, an on-site operator should implement remedial measures such as mixing outlet flows and project flows, adding liquid oxygen, or stopping project operation to protect water quality and aquatic life. Fall River should monitor to ensure that water released from the project immediately downstream from the aeration facility would not contain less than 7 mg/l of DO or the DO level of the outlet tunnel discharge measured immediately downstream, whichever is higher, to protect aquatic life in Henry's Fork. Further, Fall River should file with the Commission a DO monitoring and maintenance plan, including evidence of consultation with BR, FS, FWS, IFG, and DHW, provisions for rapid automated measures that alter project operation, including project shutdown to maintain the minimum DO concentration limit, and provisions for an on-site project operator to ensure that DO is maintained; such a monitoring plan is required by FS section 4(e) condition no. 7.

Dissolved nitrogen levels in Henry's Fork exceed the state standard at times and has been measured at the project site as high as 110.4 percent of saturation by the BR and 111.9 percent of saturation by Fall River (Ecosystems, 1988). Spring spillway flows and Fall River's turbine venting and experimental aeration system have the capacity to increase total dissolved gases to over 110 percent of saturation. The IFG has recommended and BR and FS section 4(e) conditions would set a total dissolved gas upper limit of 110 percent of saturation, the state standard, to protect the fishery from gas bubble disease from excessive dissolved nitrogen. Maintaining total dissolved gas levels no higher than 110 percent of saturation is necessary to protect water quality and aquatic life. Fall River should, therefore, include in the DO protection plan provisions to monitor to ensure that total dissolved gases would not exceed 110 percent of saturation in the water released to the Henry's Fork, and measures for rapid alteration of project operations to comply with this limit.

d. Temperature

The proposed project would withdraw water from near the bottom of the reservoir which should result in water temperatures similar to existing conditions and beneficial to the down-

stream fishery, wildlife, and other aquatic life. The project, however, would allow spring spillway surplus overflows that are too warm for salmonid spawning to enter the Henry's Fork.

FS, BR, FWS, IFG, HFF, and the GYC are concerned that the project would significantly increase or decrease the water temperature and adversely affect the Henry's Fork fishery. The FS section 4(e) condition requires that the water released from the project not be significantly higher or lower than the existing outlet water temperatures of current releases, and BR requires that the water released should not be a higher temperature than water released from the existing outlet at the dam.

Fall River's temperature monitoring shows that when BR releases warm water from the reservoir surface via the spillway during May (11.5 to 16°C) and June (13.1 to 17°C), these flows are in violation of the state standard for temperature in the Henry's Fork for salmonid spawning waters, which is 13°C or less with a maximum daily average no greater than 9°C (Ecosystems, 1988). Fall River's monitoring also showed that the temperature in Henry's Fork below the dam ranged from a low of 3.5 to a high of 17°C (Ecosystems, 1988).

Fall River's compliance with the FS and BR section 4(e) conditions requiring maintenance of existing temperatures would not ensure that state water temperature standards are maintained. Any license issued by the Commission must ensure, at a minimum, maintenance of the state water quality standards. Operating the project using deep level reservoir water with the following temperature limits, however, would maintain the state standard and enhance water quality and aquatic resources: (1) an upper limit of 13°C or less with a maximum daily average of no greater than 9°C during salmonid spawning, March 1 through June 30, and October 1 through November 30; and (2) at other times, a minimum limit of 3°C and a maximum limit of 17°C, which are the existing conditions and within the state standard. These measures are consistent with agency recommendations, agency 4(e) conditions, ECPA conservation provisions, and would improve water conditions as compared to the current BR project operation. Fall River, therefore, should implement the above requirements.

e. Minimum Flows

The proposed hydro project operation would not alter, increase, or decrease flows in the existing BR operation mode of the Island Park dam and reservoir. Under the proposed project operation, fish, wildlife, and visual resources, recreational use, and downstream mid-summer irrigational use would be unaffected, therefore, the status quo would be maintained.

There are opportunities to enhance the natural reources of the Henry's Fork downstream of the Island Park dam by increasing flows. The Commission, however, does not have the authority to require an increase in flows from dam to enhance the downstream environment because (1) BR has complete control over the releases from the dam and hyroelectric generation is secondary to irrigation; and (2) ECPA prohibits the Commission issuing a license that significantly alters flows from the project (see section IV.C). On August 15, 1988, staff met with BR, IFG, Fall River, and a representative from the office of the U.S. Senator, James A. McClure in Boise, Idaho, to discuss the possibility of BR providing the minimum flows recommended by the staff. BR did not believe it was necessary to alter their section 4(e) condition to provide for increased minimum flows. The following analysis is provided for information purposes only.

BR operates the Island Park dam with no continuous minimum flows, which results in the following adverse environmental impacts downstream on the Henry's Fork: (1) reductions in fish and wildlife habitat and aquatic vegetation; (2) increased ice formation; (3) losses of all life stages of trout; (4) losses of recreation opportunities; and (5) reductions in fish growth and reductions in fish year classes (Angradi and Contor, 1987, 1988; Ecosystems, 1988; personal communication, Dr. Jack Griffith and Mr. Craig Contor, Idaho State University, Pocatello, Idaho, April 20, 1988; and personal communication, Dr. M.R. Mickelson, Henry's Fork Foundation, Pocatello, Idaho, April 20, 1988).

Because of low winter flow releases the reservoir usually fills up in early spring resulting in high spring overflows of surplus water through the spillway (Ecosystems, 1988). These high spring surplus overflows result in the following adverse environmental impacts downstream on the Henry's Fork: (1) disruption of waterfowl nesting and the flooding of most nests; (2) water temperatures too high to meet the state water quality standard; and (3) overflows too high in dissolved gases such as nitrogen to meet the state water quality standard (Angradi and Contor, 1987, 1988; Ecosystems, 1988; personal communication, Dr. Jack Griffith and Mr. Craig Contor, Idaho State University, Pocatello, Idaho, April 20, 1988; and personal communication, Dr. M.R. Mickelson, Henry's Fork Foundation, Pocatello, Idaho, April 20, 1988).

FS is concerned about minimum flows to protect natural resources and water uses but offers no recommendations or section 4(e) conditions to deal with this issue. Interior is concerned with minimum flows to protect fish and wildlife resources and aquatic vegetation from

river icing but only addresses providing these flows on an "as needed" basis, insists that Fall River follow the BR release schedule, and does not address minimum flows in their BR section 4(e) conditions. FWS, IFG, HFF, and the GYC are also concerned that the project would adversely impact flows needed to protect natural resources from river icing, habitat loss, and fishing opportunities. IFG initially, recommended a 300 cfs minimum flow to protect fish and wildlife resources, but subsequently withdrew its recommendation (agency meeting, Boise, Idaho, August 15, 1988). The Idaho State Legislature, in March 1987, passed Concurrent Resolution No. 114, authorizing the Idaho Water Resource Board to apply for a permit to raise the minimum flows for Henry's Fork to 300 cfs from October 1 through March 31, and 1,000 cfs from April 1 through September 30.

Operation of the hydro project using surplus water normally spilled over in the spring as a continuous minimum flows could significantly enhance the BR project operation since this would result in enhancing the natural resources and recreational uses dependent on flow releases from the dam. The benefits of increasing minimum flows are discussed below.

Various flow studies have been conducted on the Henry's Fork in recent years. In 1978, the IFG used the wetted perimeter method to determine the instream flow needs in a low gradient area of Harriman State Park (figures 1 and 2) and recommended a minimum flow of 177 cfs to protect fisheries (Ecosystems, 1988). Another flow study in the park by Northwest Environmental Services was performed for Fall River (Roberts and Buck, 1986). This study evaluated flows of 50, 100, 300, and 500 cfs and found that a 500 cfs minimum flow best protected fish, wildlife, downstream water uses, and aquatic vegetation. Study results show that 500 cfs allowed more bank and shallow river edge habitat to remain ice-free and available for aquatic resources year-round, more aquatic vegetation growth, more use by all life stages of trout, and more use by trumpeter swans, other waterfowl, and foraging bald eagles.

IFG, in 1987, evaluated minimum flow in the park using the FWS's Instream Flow Incremental Methodology (IFIM) (Van Vooren, 1987). This study evaluated flows for support of rainbow trout and found that flows from 200 to 500 cfs best protected habitat of various trout life stages and found 400 cfs as the flow that best protected all life stages of rainbow trout in this reach of the river. The 300 cfs recommended by IFG for the project and the 400 cfs recommended by Van Vooren, however, would not provide as much year-round bank and shallow river edge habitat as the 500 cfs recommended by Roberts and Buck in 1986.

Continuing studies by the Idaho State University Cooperative Fish and Wildlife Research Unit (ICOOP) on the fishery resources from the Island Park dam to Hatchery Ford (figures 1 and 2) show that: (1) fish are more abundant and grow faster in the river section 3 to 4 miles below the dam than in the rest of the 12-mile study reach; and (2) river bank habitat is an important requirement of many fish life stages which would best be protected by at least a 500 cfs minimum flow (Angradi and Contour, 1987; 1988). As stated earlier, 500 cfs best protects trout, wildlife, aquatic vegetation, downstream uses, and recreation needs.

Based on the Tenant method, the Idaho Department of Parks and Recreation (DPR) has recommended to the Idaho Water Resource Board minimum flows of 300 cfs from October 1 through March 31, and 1,000 cfs from April 1 through September 30, for aesthetics and recreational purposes. While a flow of 1,000 cfs is desirable for larger boat use and looks pleasing, during April and May, this flow would flood most waterfowl nests and wash eggs downstream, and as stated above, these kinds of impacts from spring overflows are a regular seasonal occurrence.

Using surplus water as a continuous project minimum flow of 400 cfs from October 1 through May 31 combined with approximately at least 100 cfs from the Buffalo River, located downstream from the dam, would provide a 500 cfs minimum flow to the Henry's Fork (figures 1 and 2). This 500 cfs minimum flow would protect and enhance natural resources in the following ways: (1) provide a sufficient quantity of good quality water that ensures the state standards would be met; (2) provide for existing downstream water uses; (3) provide year-round bank and shallow river edge habitat for fishery resources and wildlife resources; (4) provide waterfowl feeding, wintering, and nesting habitat; (5) provide endangered and threatened species habitat; (6) provide shallow areas for growth of aquatic vegetation; (7) provide for aesthetics; and (8) allow most recreation and boating uses.

Flows over 500 cfs would allow larger boats access for recreation during April and May but would also result in the flooding of waterfowl nests, which presently occurs when spring overflows from the dam are greater than 500 cfs. A minimum flow of 900 cfs from June 1 through September 30 combined with at least 100 cfs from the Buffalo River downstream would provide a 1,000 cfs minimum flow to the Henry's Fork, which would adequately protect fish and wildlife resources, the above listed uses, recreation and aesthetics during the most heavy rec-

reation-use period of the year. Minimum flows of 400 cfs from October 1 through May 31 and 900 cfs from June 1 through September 30, would substantially enhance the natural resources and water uses listed above. These minimum flows, however, could be available only when the reservoir water budget assures that there would be no conflicts with future irrigation needs. The increased minimum flows would also result in the need for BR to coordinate yearly flow planning from April 1 through March 31 with Fall River, Fremont Madison Irrigation District, DHW, FS, FWS, IFG, Idaho Water Resource Board, HFE, and GYC and the need for Fall River to monitor flows in coordination with the aforementioned agencies and groups.

f. Ramping Rates

The proposed project operation would affect the ramping rates (the speed at which flow releases are increased or decreased as measured over a unit of time such as an hour or half an hour). Ramping rates that rapidly increase or decrease water levels downstream from the dam affect water quality, fish and other aquatic life, waterfowl, raptors and other wildlife, and aquatic vegetation.

BR operates the Island Park dam with no set ramping rates, which results in the following adverse environmental impacts downstream: (1) reductions in fish and wildlife habitat and aquatic vegetation; (2) increased ice formation; (3) losses of all life stages of trout; (4) losses of recreation opportunities; and (5) reductions in fish growth and reductions in fish year classes (Angradi and Contor, 1987, 1988; Ecosystems, 1988; personal communication, Dr. Jack Griffith and Mr. Craig Contor, Idaho State University, Pocatello, Idaho, April 20, 1988; and personal communication, Dr. M.R. Mickelson, Henry's Fork Foundation Pocatello, Idaho, April 20, 1988).

FS states that ramping rates are needed to protect recreational uses from water reductions, and to protect natural resources from habitat and population losses, and river icing, but offers no recommendations or section 4(e) conditions to deal with this issue. Interior is concerned about ramping rates causing river icing and fishery and waterfowl losses but does not address ramping rates in their BR section 4(e) conditions. FWS, IFG, HFF, and the GYC are also concerned that the project would adversely impact ramping rates and cause fishery and waterfowl population losses and losses in fishing opportunities. IFG recently requested ramping rates of 50 cfs per half an hour to protect fish and wildlife resources in their December 10, 1987, and February 25, 1988, letters to BR.

Ramping rates would enhance fishery resources in Henry's Fork. Research has shown that trout in the Henry's Fork hide along the shoreline during the daylight hours and come out of the shoreline areas during cover of darkness, and that when flows are reduced drastically, stranding and desiccation of juvenile trout, trout eggs, trout fry, and sometimes larger trout occur (Angradi and Contor, 1987; 1988). These research studies also recommend a ramping rate of no more than 50 cfs during a half an hour period and that down ramping only be conducted during hours of darkness. IFG, based on these studies, has recommended down ramping during hours of darkness and a ramping rate of no more than 50 cfs per half an hour to the BR to protect fisheries. Research studies estimate that at least 100,000 juvenile trout are jeopardized during every rapid-flow reduction at the Island Park dam Angradi and Contor, 1987; 1988).

The adverse environmental impacts of rapid increases or decreases in flows in the Henry's Fork have been observed and are well documented (Angradi and Contor, 1987, 1988; Ecosystems, 1988; personal communication, Dr. Jack Griffith and Mr. Craig Contor, Idaho State University, Pocatello, Idaho, April 20, 1988; and personal communication, Dr. M.R. Mickelson, Henry's Fork Foundation, Pocatello, Idaho, April 20, 1988). Operating the project with and a decreasing-flow ramping rate of 50 cfs over a half an hour restricted to 7 p.m. to 5 a.m., and a decreasing-flow ramping rate of 50 cfs over a half an hour would avoid adverse impacts of icing, stranding, and desiccation to fish, icing to wildlife and aquatic vegetation, and should adequately protect these resources. Fall River would be better able to control flow and provide appropriate ramping rates than BR because Fall River would employ a full-time operator. Therefore, Fall River should operate the project according to the above ramping rate schedule and should develop a ramping rate monitoring plan to ensure compliance with the recommeded ramping rates.

Unavoidable Adverse Impacts: During construction, some minor localized short-term increases in turbidity at the powerhouse site would be unavoidable.

3. Fishery Resources

Affected Environment: The Island Park Reservoir, upper Henry's Fork, and lower Henry's Fork downstream from the dam contain reproducing populations of rainbow trout (*Salmo gairdneri*), brook trout (*Salvelinus fontinalis*), cutthroat trout (*Salmo clarki*) rainbow-cutthroat hybrids, and mountain whitefish (*Prosopium williamsoni*). The Island Park Reservoir is stocked with kokanee salmon

(*Oncorhynchus nerka*) and coho salmon (*Onocorchynchus kisutch*) and some of these fish pass over the spillway and enter the lower Henry's Fork. Some of the results of recent ICOOP studies on game fish in the lower Henry's Fork are found in Table 2.

Table 2. Some game fish population data for Henry's Fork from Island Park dam to Hatchery Ford (approximately 12 miles) Spring 1986 through 1987 in the vicinity of FERC Project No. 2973, Idaho (Source: Angradi and Contor, 1987; 1988, modified by the staff).

Sample area name and location	*Fish species and estimated number*	*Density per 100 square meters*	*% of rainbow trout over 350 millimeters*
Box Canyon (from the dam downstream 3 to 4 miles)	27,947 rainbow trout	11.5	21
	7,110 mountain whitefish	2.9	
	2,383 brook trout	1.4	
Railroad Ranch (4 miles downstream from the dam)	3,534 rainbow trout	3.9	7
	5,464 mountain whitefish	6.0	
Pinehaven (7 miles downstream from Railroad Ranch)	6,846 rainbow trout	3.6	3
	11,834 mountain whitefish	6.2	
Cardiac Canyon (adjacent and downstream from Pinehaven)	26,904 rainbow trout	5.5	3

Surveys conducted by the IFG show that anglers prefer fishing the Lower Henry's Fork over the Upper Henry's Fork because of the larger and more abundant fish there. Because of these reasons, the Lower Henry's Fork is considered a "world class blue ribbon" wild trout stream. The Lower Henry's Fork fishery has an annual net economic value of $2.86 million dollars (Angradi and Contor, 1987; 1988).

The spawning season for salmonid species in Henry's Fork varies as follows: rainbow and rainbow-cutthroat hybrid trout, March through April; cutthroat trout, April through June; brook trout, October through November; and mountain whitefish, November through December. Because the rainbow, rainbow-cutthroat, and cutthroat trout are spawning together, pure rainbow and cutthroat trout species are rare in the lower Henry's Fork (personal communication, Mr. Craig Contor, Idaho State University, Pocatello, Idaho, April 20, 1988; and personal communication, Mr. Steve Elle, Idaho Department of Fish and Game, Idaho Falls, Idaho, April 20, 1988).

Environmental Impacts and Recommendations: As discussed in the previous section on water resources, the FS, BR, FWS, IFG, HFF, and GYC state that project construction and operation impacts on water turbidity, reservoir drawdown levels, DO levels, TDG levels, water temperature, minimum flows, and ramping rates would adversely affect fisheries. These concerns were discussed and reduced or eliminated by design changes and mitigation proposed to enhance fisheries in the previous water resources section. This mitigation would result in the only minor short-term increases in water turbidity from project construction that would not greatly affect the downstream fishery.

FS, BR, FWS, IFG, HFF, and GYC state that the project would entrain fish from the reservoir through the siphon intake and FS and BR have submitted section 4(e) conditions that provide for their final approval of the intake design. The intake has been redesigned, however, with its location on the bottom of the reservoir using a "well screen" with 3/8-inch openings. Since DO levels on the reservoir bottom are low most of the year salmonids are precluded from being in this intake area (Ecosystems, 1988). In addition, the 3/8-inch opening would only allow small fry-sized salmonids to go into the siphon and these fish life stages are not found in this bottom area of the reservoir because of low DO levels (Ecosystems, 1988). The staff concludes that the proposed location and intake design adequately protects the fisheries.

Unavoidable Adverse Impacts: During construction, some minor localized short-term increases in turbidity at the powerhouse would be unavoidable.

4. Vegetation

Affected Environment: Lodgepole pine (*Pinus contorta*) forests dominate the area around the Island Park reservoir. The forest

contains many dead and dying trees because of a mountain pine beetle infestation. These forests are relatively open and support an understory of low shrub and perennial herbaceous vegetation dominated by arnica (*Arnica cordifolia*), littleleaf huckleberry (*Vaccinum scoparium*), and low sedge (*Carex geyeri*). Forest openings contain dense stands of mule's ears (*Wyethia amplexicaulis*).

The ravine below the dam contains numerous seepage areas and a more humid environment which supports Douglas-fir (*Pseudotsuga menziesii*) and subalpine fir (*Abies lasiocarpa*). Shrub vegetation includes chokecherry (*Prunus virginiana*), wild rose (*Rosa nutkana*), resin birch (*Betula glandulosa*), and dwarf juniper (*Juniperus communis*). Low, wet areas below the dam are dominated by riparian species including trembling aspen (*Populus tremuloides*), narrow-leaved cottonwood (*P. angustifolia*), and willows (*Salix spp.*). Aquatic vegetation in the shallow areas of the reservoir include water-milfoil (*Myriophillum exalbescens*), elodea (*Elodea canadensis*), and pondweeds (*Potamogeton spp.*). Shallows created by sedimentation in the eastern portion of the reservoir are dominated by sedges (*Carex spp.*). The land southwest of the reservoir is dominated by sagebrush (Artemisia triadentata). The area surrounding the proposed hydroelectric project has been disturbed by the recent construction activity associated with rehabilitation of the dam and spillway by BR.

Environmental Impacts and Recommendations: The 700-foot-long penstock would be buried along the existing dam embankment which has been disturbed by the rehabilitation of the dam. The powerhouse, aeration tailrace, and transformer yard are also within recent construction areas and additional clearing would be minimal. Access would be via existing roads and would require an additional 200 feet of clearing. In total, approximately 0.5 acre of lodgepole pine forest would be cleared for the construction of these facilities.

The transmission line would be buried along the existing dike and existing roads for most of its length. The interconnection would involve clearing a 15-foot-wide right-of-way from the road to the existing transmission line, would remove about 2 acres of lodgepole pine, which is very common in the project area. Fall River proposes to reseed disturbed areas with native species and landscape in accordance with FS and BR section 4(e) conditions. These measures would adequately mitigate the 2 acre loss of lodgepole pine.

Unavoidable Adverse Impacts: Approximately 2.5 acres of lodgepole pine forest would be cleared for the construction of the proposed facilities.

5. Wildlife Resources

Affected Environment: Species in the project area include elk (*Cervus canadensis*), mule deer (*Odocoileus hemionus*), moose (*Alces alces*), black bear (*Urus americanus*), and bighorn sheep (*Ovis canadensis*). Pronghorn antelope (*Antilocapra americana*) occupy the sagebrush-grasslands in the area. Mammals found along the streams and area wetlands include mink (Mustela vison), muskrat (*Ondatra zibethica*), and otter (*Lutra canadensis*). The reservoir and surrounding wetlands provide habitat for waterfowl. Canvasbacks (*Aythya valisineria*), redhead ducks (*A. americana*), Canada geese (*Branta canadensis*), great blue heron (*Ardea herodias*), snipe (*Capella gallinago*), and spotted sandpipers (*Actitis maculeria*) nest at Island Park Reservoir. Other bird species in the reservoir area include blue grouse (*Dendragapus obscurus*), ruffed grouse (*Bonasa umbellus*), sharp-tailed grouse (*Pedioecetes phasianellus*), mourning dove (*Zenaida macroura*), and osprey (*Pandion haliaetus*). Wildlife habitat management for the reservoir is a cooperative effort between the Targhee National Forest and the IFG.

A population of trumpeter swans (*Cygnus buccinator*) also winters in the area. The trumpeter swan is considered a National Species of Special Emphasis by FWS and a Species of Special Concern by the IFG. According to FWS (letter from John P. Wolfin, Field Supervisor, Boise Field Office, Boise, Idaho, September 23, 1986), there are currently about 10,000 trumpeter swans in North America. Roughly 1,600 trumpeters make up the Rocky Mountain population, which breeds in Montana, Idaho, Wyoming, and Canada. A significant portion (up to 600 censused on a single day) of the population winters along the Henry's Fork feeding on elodea, water-milfoil, and pondweeds, in the slow-moving sections in the river. The principal winter feeding area is Harriman State Park, which is one of the three major wintering sites for this population (Shea, 1978).

Winter flow releases from the Island Park dam 4 miles upstream directly affect the feeding habitat for these wintering swans. The reservoir is normally filled during the fall and winter for the next summer irrigation season by reducing flow releases from the dam. In the past, low flow releases (less than 300 cfs) have reduced the feeding areas by narrowing the channel and increasing the amount of ice on the river. In recent years, officials at Harriman State Park, during the daylight hours, have notified BR when additional flow releases were needed to open up feeding areas for trumpeter swans during adverse weather conditions. One

of the goals of the Migratory Bird National Resource Plan for the Rocky Mountain Population of Trumpeter Swans is to maintain a minimum wintering population of 300 to 400 adult trumpeter swans on the Henry's Fork (U.S. Fish and Wildlife Service, Office of Migratory Bird Management, 1985).

Environmental Impacts and Recommendations: Construction activities would be primarily confined to the area that was previously disturbed during the rehabilitation of the dam. The exception is the transmission line, which would utilize existing roads and involve clearing approximately 2 acres of lodgepole pine. The long-term loss of 2 acres of lodgepole pine would not be significant because it is a very common tree in the area. The disturbance to wildlife due to human presence and construction activities would be minor and short-term. Lowering the reservoir during construction would have the potential to affect reservoir wetlands and associated wildlife; however, proposed construction would not require additional reservoir drawdown and BR's section 4(e) condition restricts the drawdown elevation level to 6,289 m.s.l.

Because of the effects of flow releases from the dam on wintering trumpeter swan population downstream, there has been much agency and public concern over providing adequate winter minimum flow releases to fill the channel and keep it free of ice. The FWS and BR have entered into an agreement for the operation of the reservoir to begin storage of water in the fall for winter release to protect trumpeter swan feeding habitat downstream. Fall River proposes operating on the release regime determined by the BR. Fall River states that an improved winter release management regime would benefit the project as well as trumpeter swans. In addition, Fall River has committed to aid funding a trumpeter swan study, conducted by FWS, BR, and Harriman State Park, to determine the water releases needed to protect swan wintering habitat. This agreement, however, as stated in the water resource section, does not provide any fixed minimum flows to prevent river icing or protect wildlife and aquatic habitat. An instream flow study found that a continuous flow of 500 cfs best protected trumpeter swan feeding habitat, other waterfowl, and aquatic vegetation by preventing river icing (Roberts and Buck, 1986). In addition, this study found that flows above 500 cfs, during April and May, would flood geese nesting habitat. If flows were allowed to increase in the future, the release of 500 cfs could provide more protection to wildlife and wildlife habitat than the current BR flow regime, as discussed in section V.B.2.

6. Threatened and Endangered Species

Affected Environment: The FWS (letter from Charles S. Polityka, Regional Environmental Officer, Pacific Northwest Region, U.S. Department of the Interior, Portland, Oregon, December 30, 1985) has determined that the bald eagle (*Haliaeetus leucocephalus*) federally listed as endangered and grizzly bear (*Ursus arctos horribilis*), federally listed as threatened, may be present in the area.

The Island Park area has been designated a key area of the Greater Yellowstone Bald Eagle Ecosystem. Two active bald eagle nests have been reported in the area and a population of approximately 50 bald eagles winter in the Island Park area (Fall River Rural Electric Cooperative, Inc., 1986). FWS does not report any endangered fish or plants in the project area, but lists four Category 2 candidate plant species as possibly occurring in Fremont County (letter from Charles S. Polityka, referenced above). Category 2 species are candidates for listing that currently lack sufficient data on biological vulnerability and threat(s) to support listing. None were found during biological surveys of the area (Fall River Rural Electric Cooperative, Inc., 1986).

Environmental Impacts and Recommendations: Bald eagles nest and winter in the project area. Above ground transmission lines would pose potential electrocution and collision hazards to eagles and other raptors. FWS recommends that Fall River bury the transmission line rather then using an above-ground design. Fall River proposes to do so. The burying of the transmission, which is required by FS section 4(e) conditions, would ensure that eagles are protected.

Secondary impacts currently occur to wintering bald eagles from impacts to their food source (fish) or from icing of the river below the dam, which restrict eagles from taking fish. These impacts could be avoided if increased flows are provided in the future, as discussed in the water resources section (section V.B.2).

Although the project area is within grizzly bear habitat, no grizzly bears have been reported in the immediate project area, which makes man-bear conflicts unlikely. Further, the project area has been subjected to human disturbance during the rehabilitation of the dam and spillway. The FS section 4(e) conditions require Fall River to comply with management situation No. 3 of the "Guidelines for the Management Involving Grizzly Bears in the Greater Yellowstone Area." The guidelines would require Fall River to implement the following measures: (1) initiate consultation procedures with the FWS; (2) identify grizzly-human conflict and recommend measures to minimize conflict potential; (3) regulate contractors so no food source will be available to

grizzlies, require the storage of garbage in sufficient bear-proof containers with daily pickup and removal and include these measures in written contracts; (4) allow no overnight construction camps in the project area; and (5) prohibit guns or pets such as dogs in the construction area, and resolve any grizzly-human conflicts in accordance with the guidelines.

Since bears are unlikely to use the project area, and the above guidelines would be implemented, most man-bear conflicts would be prevented and this would ensure that the grizzly bear is protected.

Unavoidable Adverse Impacts: None.

7. Visual Resources

Affected Environment: The proposed project area has a natural character with very beautiful views of mountains, forests and rivers. The proposed project site has been under construction for many years with the development of the dam, reservoir, and recreation facilities. When construction is complete, the site would assume a more natural appearance in keeping with the adjacent recreational development and high visibility of the area. The portion of the Henry's Fork from Big Springs to the confluence with Warm River is part of the National Rivers Inventory. Although this section is very beautiful in appearance, it has been listed primarily for its recreational resources and fishery.

Environmental Impacts and Recommendations: Fall River has proposed mitigation to blend the proposed project facilities with the surrounding area. Proposed mitigative measures include burying the penstock and transmission line and using colors and building materials similar to those existing in the area. The FS manages the area for retention of the very beautiful scenery and also to protect those values inherent in a high-use recreation area. This recreational area includes a potential portion of a Wild and Scenic River, and a possible National Recreational Water trail.

Fall River's proposed mitigation described above would adequately maintain the visual quality of the area and would ensure that the proposed facilities adequately fit into the proposed plan of the dam and other facilities presently under construction.

The release of increased flows from the Island Park dam in the future could enhance visual quality downstream of the dam, as discussed in section V.B.2.

Unavoidable Adverse Impacts: None.

8. Cultural Resources

Affected environment: A cultural resources survey of the project area has been conducted. No properties have been identified in the area as listed on or eligible for listing on the *National Register of Historic Places* (letters from Dr. Thomas Green, State Archeologist, State Historic Preservation Office (SHPO), Idaho Historical Society, Boise, Idaho, December 4, 1985; and John Burns, Forest Supervisor, Forest Service, Targhee National Forest, St. Anthony, Idaho, December 2, 1985; and Robert Barbo, Regional Supervisor, Bureau of Reclamation, Pacific Northeast Region, Boise, Idaho, December 13, 1985).

Environmental Impacts and Recommendations: Land-clearing and land-disturbing activities could adversely affect archeological and historic properties not previously identified in the project area. Therefore, if the licensee encounters such properties during the development of the project works or related facilities, the licensee should stop land-clearing and land-disturbing activities in the vicinity of the properties and should consult with the SHPO, the FS, and BR on the eligibility of the properties and design such measures as may be necessary to avoid or mitigate effects on the properties. In addition, before beginning land-clearing or land-disturbing activities within the project boundaries, other than those specifically authorized in the license, the licensee should consult with the SHPO, the FS, and BR about the need to conduct an archeological or historical survey and the need for avoidance or mitigative measures. In these instances, 60 days before starting such land-clearing or land-disturbing activities, the licensee should file a plan and a schedule for conducting the appropriate studies along with a copy of the SHPO'S the FS's, and BR's written comments concerning the plan and the schedule. Prior to starting to excavate or to remove any archeological resource located on National Forest System or BR lands, the licensee should secure a permit from the FS authorizing such excavation or removal. The licensee should not start land-clearing or land-disturbing activities, other than those specifically authorized in this license, or resume such activities in the vicinity of an archeological or historic property discovered during construction, until informed that the requirements discussed above have been fulfilled.

Unavoidable Adverse Impacts: None.

9. Recreation and Other Land and Water Uses

Affected Environment: Recreational activities in the project area include fishing, hunting, non-white water river boating, camping, picnicking, sightseeing, snowmobiling, and cross-county skiing. Recreational use occurs year-round, but the primary recreation season is from Memorial Day to Labor Day. In 1986, visitation to the Island Park area was 398,595 recreation visitor days (one visitor day equals

one visit per person for any part of a 12-hour period) with most of the use coming from residents of Idaho, California, and Utah (personal communication, Tim Kimble, Recreation Land Assistant, Island Park Ranger District, Targhee National Forest, Idaho, March 10, 1987).

The primary recreational activity in the project area is sportfishing. The Henry's Fork immediately below Island Park Dam is internationally renowned for its fine trout fishing. The IFG states that the 0.4-mile stretch of river from Island Park Dam downstream to the confluence with the Buffalo River has the highest use of any wild fish stream in the state of Idaho. The use rate is 14,500 hours fished per mile with a success rate of 1.3 fish per hour (Fall River Rural Electric Cooperative, Inc., 1985). Some of this fishing pressure is from tourists travelling through the area to nearby Yellowstone National Park (figure 1).

Recreational facilities in the project area consist of two parking areas for public access; one is located to the west of the dam adjacent to the Harriman Wildlife Refuge, and the other is located to the east, just downstream of the dam. The BR in cooperation with the FS has completed minor upgrading and relocation of the road to the east dam site known as the Box Canyon boat launch. This area is the only public access site for a 4-mile-long stretch downstream from the dam and is used heavily by commercial outfitters as a float-boat launching point. Other recreational facilities close to the project area are a boat ramp on the reservoir one-half mile northeast of the dam and the Box Canyon and Buffalo Creek campgrounds on Buffalo Creek. All facilities are owned and operated by the FS.

The Henry's Fork from Big Springs downstream to the confluence with the Warm River, excluding Island Park Dam and reservoir, is listed on the Nationwide Rivers Inventory for its outstanding values of recreation, geology, fish, and wildlife. The Targhee National Forest staff is studying this same section of the Henry's Fork for possible designation as a wild and scenic river. The Act as amended by the ECPA includes a provision restricting further development of hydropower projects on portions of the Henry's Fork but allowing the licensing of the Island Park Dam Project so long as the Commission determines that significant and permanent alteration of streamflow, habitat, water temperature, and water quality would not occur as a result of the project (*see* section IV.C.).

In addition to recreation, land in the project vicinity is used for timber production and vacation homes. The primary water use, besides recreation, is mid-summer irrigation, but other water uses include human consumption, wildlife and fisheries habitat, and power generation.

Environmental Impacts and Recommendations:

A. Construction Impacts

During construction, the noise from machinery, the presence of construction vehicles using the access roads, and the intrusion on visual quality would disturb recreationists using the area. Angler access to the Henry's Fork would be restricted during construction of the penstock and powerhouse and traffic would be limited to one lane for about 2 weeks during burial of the transmission line along the access road. Fall River proposes to construct these facilities during a 4-month period beginning late September when the prime recreation season is over and visitor use of the project area has decreased. The HFF states that the fishing season extends to November 30 in the Box Canyon area and that 11 outfitters are licensed to float and guide fishermen on the river during that time. Scheduling construction after the prime recreation season should satisfy recreational needs in the project area. Fall River should consult with the FS, BR, and DPR in scheduling construction activities.

B. Effects on Sportfishing

Project operation could impact sportfishing in the project area. The outstanding trout sportfishery is dependent upon water quality, water quantity, and maintenance of the fishery. Mitigation of impacts to these resources would mitigate impacts to recreation, as discussed in the previous sections 2 and 3, Water Resources and Fishery Resources, respectively. If increased minimum flows from Island Park dam were provided in the future, the existing fishery resources and boating opportunities could be enhanced, as discussed in section V.B.2.

C. Recreational Development

Construction and operation of the proposed project offers the opportunity for enhancement of public access and recreational facilities at the project. Fall River proposes to: (1) reconstruct the parking area at the Box Canyon boat launch area; (2) install rest-room facilities and provide a trail from the parking area to the boat launch; (3) construct a trail along the river from the boat launch area to the powerhouse; and (4) provide a fishing access walkway between the powerhouse and the river. The FS and the BR support construction of these facilities and section 4(e) conditions require that Fall River consult further with the agencies and file a plan detailing the development of these facilities. The FS further recommends that because of the potential for the

Henry's Fork becoming a wild and scenic river, these facilities should be carefully designed and built since they would be the first view many visitors have of the river. Fall River agrees to consult with the agencies on recreational facilities development at the project and is committed to constructing the recreational facilities that would provide for the current recreational needs at the project. Fall River, therefore, should consult with the FS, BR, and the DPR to determine the final design and location of the recreation facilities; FS section 4(e) condition no. 5 requires such a plan.

D. Brimstone Ski Trail

The location of project facilities and winter access to the project area for operation and maintenance could adversely affect recreational use of the Brimstone cross-country ski trail. The FS recommends that the applicant relocate the Brimstone trail if it is affected by the construction of project facilities. FS also recommends that snowmobiles or cross-country skis be used as access to the project during the winter so that the access road would not need to be plowed. Fall River agrees to use snowmobiles, except during emergencies, for project operation and maintenance in the winter. Relocating areas of the Brimstone ski trail that would be adversely affected by project construction and Fall River's proposal to use only snowmobiles for access during winter would ensure that cross-country skiing is not disturbed.

E. Wild and Scenic River Designation

While the immediate project area is not proposed for designation as a wild and scenic river, the proposed project is upstream of and could impact a segment of the Henry's Fork that is being studied for potential wild and scenic designation. The HFF and the GYC are concerned that licensing the project would adversely affect those values for which the Henry's Fork is being studied. The FS and the BR state that the area must be managed so as not to impede its potential designation as a wild and scenic river and state that construction and operation of the project would not affect the eligibility of the Henry's Fork for the wild and scenic river system. Mitigation measures proposed by Fall River, the agencies, and the staff would ensure that the recreational, geological, and fish and wildlife values for which the Henry's Fork is being studied for designation as a wild and scenic river are maintained.

F. Future Recreational Needs

As a result of improved recreational access and facilities and potential designation as a wild and scenic river, visitation to the project area may increase. The FS provided a section 4(e) condition that requires the licensee to consult annually with the FS to ensure the protection and development of the natural resource values, including recreation, in the project area. The HFF requests that the Commission retain the authority to require expansion of recreational facilities in the future. Fall River is expected to monitor recreational use at the project and any license issued would require the licensee to provide additional recreational facilities during the term of the license, should a need be demonstrated.

Unavoidable Adverse Impacts: Construction activities would restrict access to portions of the project area, increase noise, dust, exhaust emissions, and vehicular traffic, and reduce visual quality resulting in a temporary disturbance to recreationists using the project area.

C. Alternative of No Action

Implementation of the no-action alternative would not change the existing physical or biological components of the area, but would preclude the use of the renewable water resources of the Island Park reservoir for generating electricity.

D. Recommended Alternative

The proposed project is the recommended alternative for two reasons: the environmental effects of building and operating the project would be minor; and the electricity generated from a renewable resource would be sold to Fall River's utility customers, thus increasing profits to Fall River's cooperative members.

VI. Finding of No Significant Impact

Project construction would cause minor, short-term increases in erosion, sedimentation, turbidity, and pollutants, and would temporarily disturb local wildlife, fishing opportunities, and adversely affect aesthetic values. Project operation would cause minor long-term benefits to water, fishery, vegetation, wildlife, visual, and recreation resources. Implementing the mitigative recommendations of Fall River, the agencies, and staff would ensure that the adverse environmental effects of project construction and operation would be insignificant.

This environmental assessment was prepared for the proposed Island Park Dam Project in accordance with the National Environmental Policy Act of 1969. On the basis of the staff's independent environmental analysis, issuance of a license for this project would not constitute a major federal action significantly affecting the quality of the human environment.

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John Staples—Vegetation and Wildlife Resources, and Threatened and Endangered Species (Wildlife Biologist; M.S., Wildlife Management)

Martin Thorpe—Need for Power and Alternatives to the Proposed Project (Electrical Engineer; B.S., Electrical Engineering).

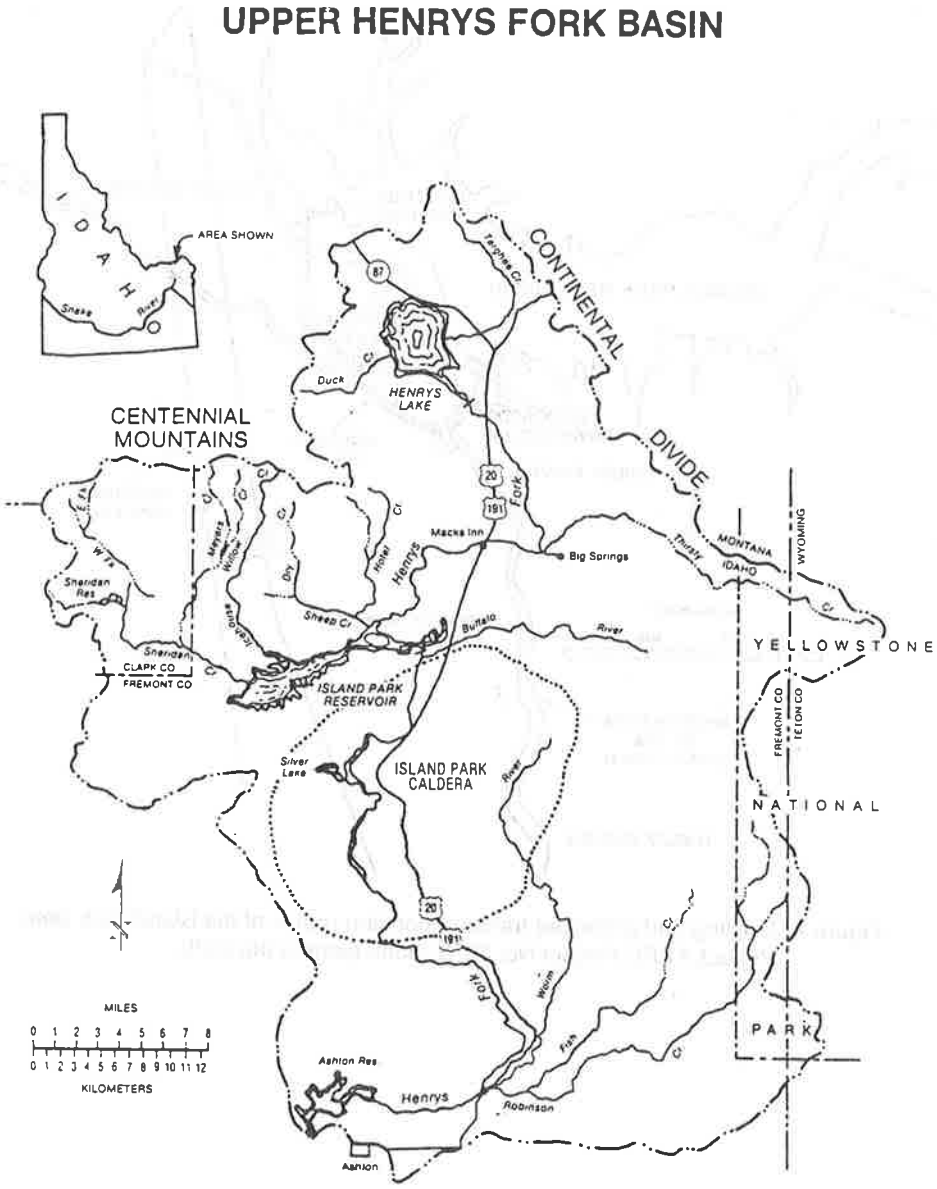

Figure 1. Location map of the proposed Island Park Dam Project, FERC Project No. 2973, Idaho (source the staff).

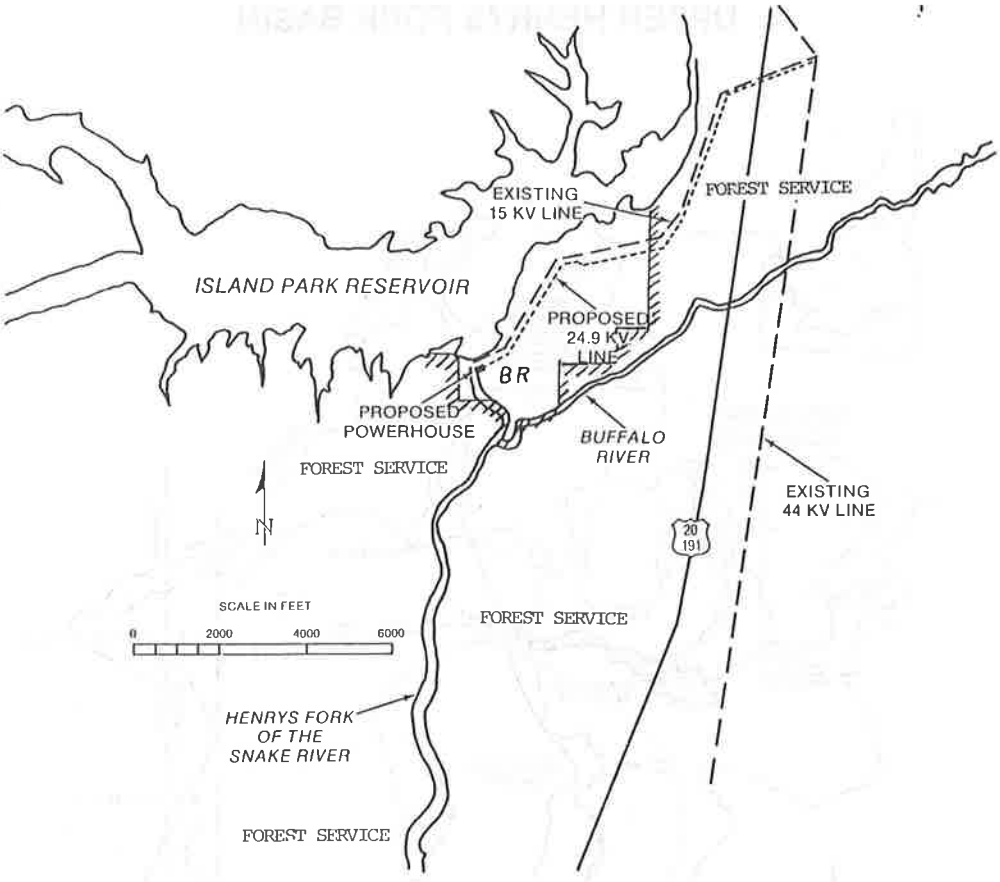

Figure 2. Existing and proposed transmission line routes of the Island Park Dam Project, FERC Project No. 2973, Idaho (source the staff).

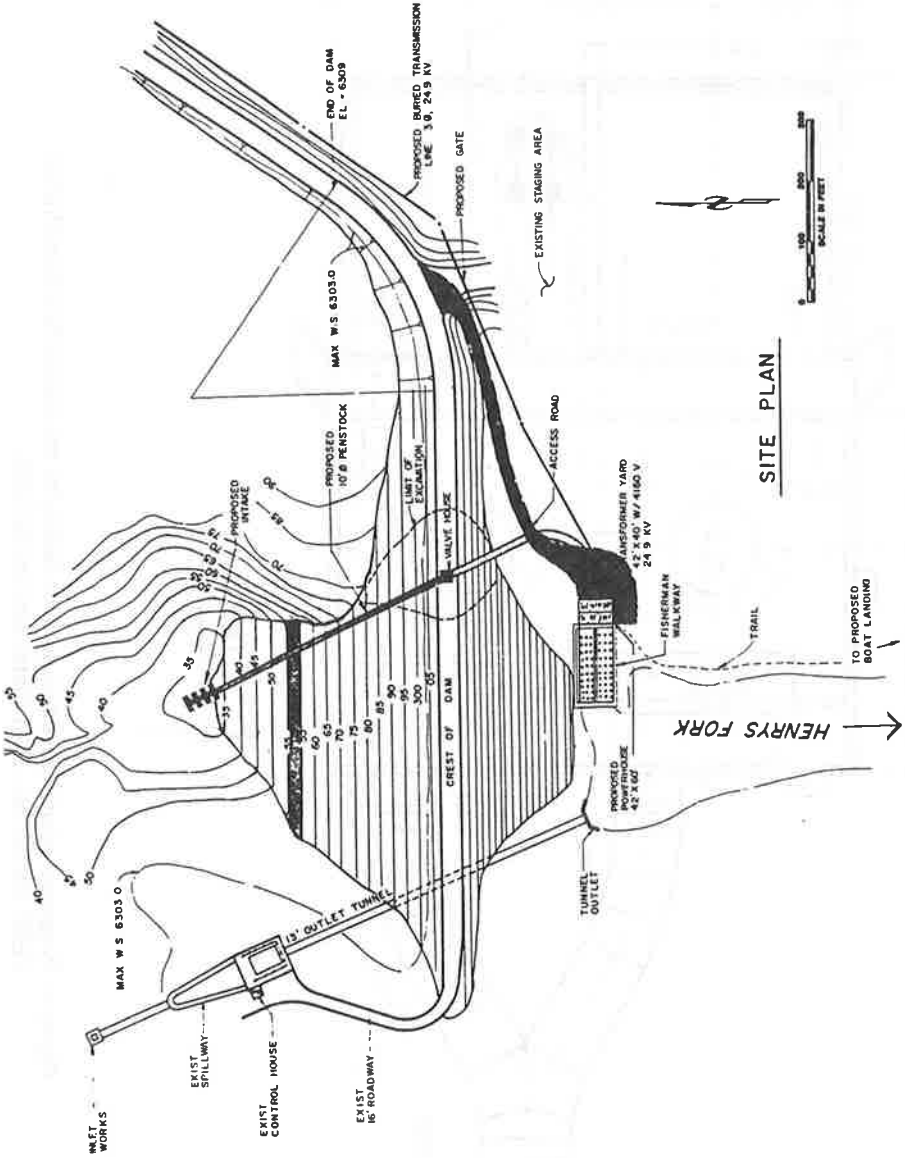

Figure 3. Proposed facilities for the Island Park Dam Project, FERC Project No. 2973, Idaho (source the staff).

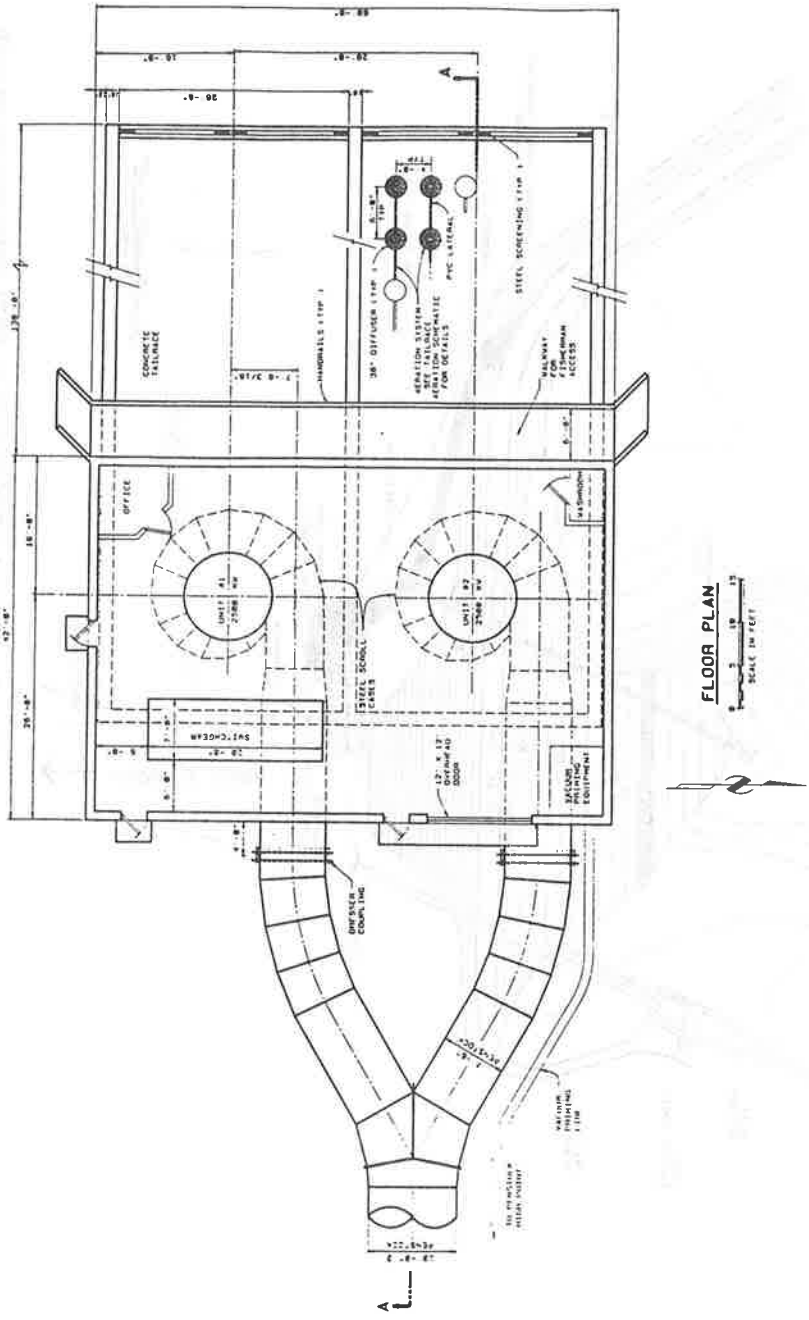

Figure 4. Proposed powerhouse and aeration facility for the Island Park Dam Project, FERC Project No. 2973, Idaho (source the staff).

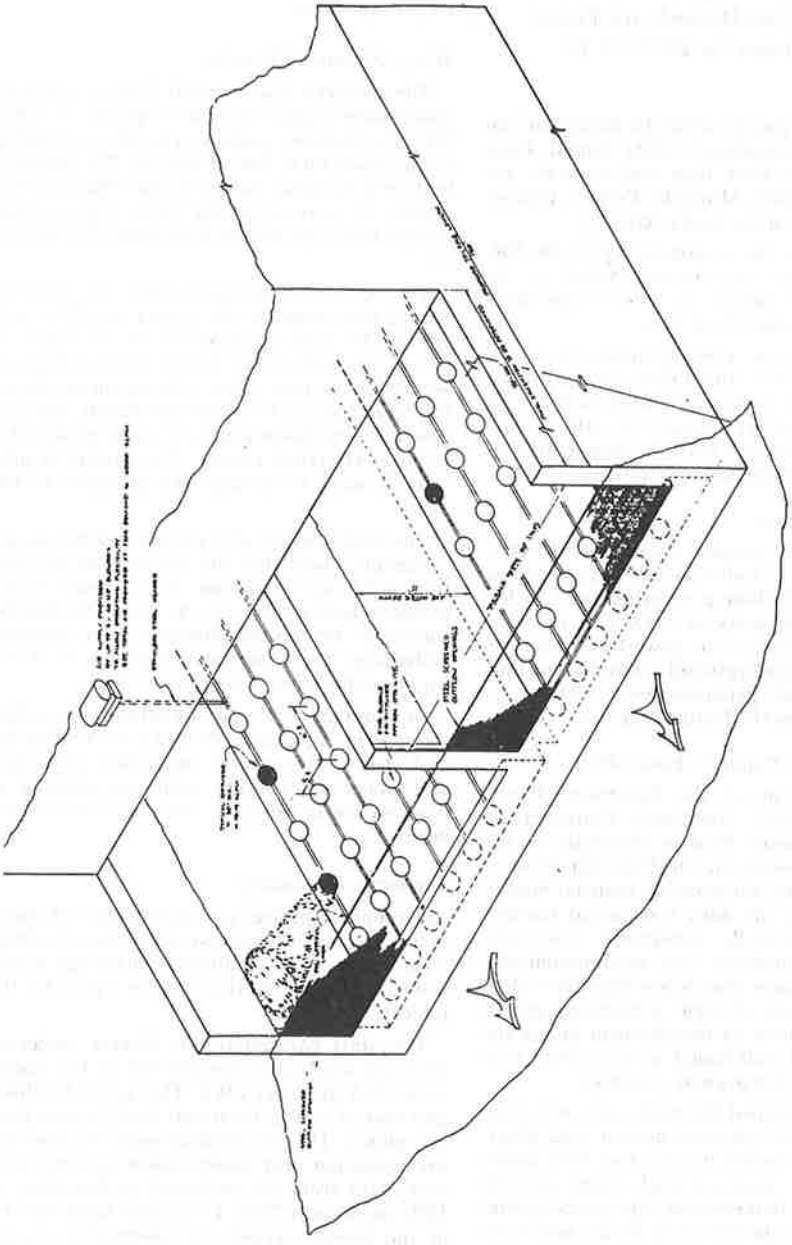

Figure 5. Proposed aeration facility for the Island Park Dam Project, FERC Project No. 2973, Idaho (source the staff).

Safety and Design Assessment
Island Park Dam Hydroelectric Project
FERC Project No. 2973-003, ID

Dam Safety

The proposed project would be located at the Bureau of Reclamation's (BR) Island Park dam. The Island Park dam and reservoir are features of the BR's Minidoka Project, located on Henry's Fork of the Snake River.

Dam safety is the responsibility of the BR. Special articles are recommended to be included in the license to protect the BR's interest in the Island Park dam.

The hydroelectric project structures would not impound water and failure of the structures would not endanger downstream life or property. The project would be safe if constructed in accordance with the license articles and with sound engineering practices.

Project Description

The mitigated project would consist of a siphon conduit, a valve house, a powerhouse containing two turbine generating units with a total installed capacity of 4,800 kW, an aeration facility located in the powerhouse tailrace, and a 24.9-kV underground transmission line. The project would generate power with irrigation releases from the Island Park dam.

Consideration of Council's Power Plan

The staff reviewed the Northwest Power Planning Council's Northwest Conservation and Electric Power Plan to determine if the project is consistent. In the Plan, the Council envisions meeting the growing regional energy requirements in the most economical manner with environmentally acceptable resources. The Council considers any environmentally acceptable resource that is less expensive than coal-fueled steam electric generation as an acceptable resource for development before the development of coal-fueled power plants (the Council's planned marginal resource).

The staff developed life-cycle costs of energy from the Council's planned generic coal plant, assumed to be needed in the year 2002 under the Council's medium-high load growth assumption, for determining if proposed hydroelectric projects are consistent in the long term with the Council's Plan, as required by section 10(a)(2) of the Act.

The staff found that the life-cycle levelized cost of the proposed project is less, as of its projected on-line date, than the levelized life-cycle cost of the least-cost or marginal long-term alternative included in the Plan, and concluded that the project as proposed is not inconsistent with the Council's Plan and is economically feasible within the long term objectives of the Plan.

Water Resource Planning

The project's two vertical Francis turbines would have a total installed capacity of 4,800 kW. The turbines would be capable of utilizing a maximum total flow of 960 cfs. The project's hydraulic capacity would be exceeded approximately 25 percent of the time. The average annual reservoir release is estimated to be 704 cfs.

The applicant estimates that the average annual generation of the project would be 26.9 GWh. The staff recommends the cessation of project operation from June 1 through September 30 for the protection of instream resources. Based on the staff's recommendation, the proposed project would generate an estimated 11.8 GWh of electrical energy. The project is adequately sized to develop the potential of the site.

The staff's review of state and federal agency comments shows that the project does not conflict with any existing or planned water resource developments in the basin. No specific comments or recommendations were received addressing flood control, irrigation or water supply requirements for Henry's Fork.

In summary, the staff's analysis shows that the project is properly designed to develop the hydropower potential of the Island Park dam and would not conflict with any existing or planned water resource developments in the basin.

Economic Evaluation

A proposed project is economically beneficial so long as its levelized cost is less than the long-term levelized cost of alternative energy to any utility in the region that can be served by the project.

The staff calculated the 50-year projected levelized alternative energy cost in the region to be 76.3 mills per kWh. This is the levelized unit cost of energy from coal-fueled steam electric plants. The cost includes only the fuel and the operation and maintenance expense of a coal plant from the projected on-line date, of 1992 to the year 2002. From 2002 until the end of the license period, the alternative energy cost includes the capital expense of new coal plant construction as well as fuel and variable expenses. The staff proposes mitigation that includes the cessation of project operation from June 1 through September 30 and the construction of an aeration facility in the tailrace of the powerhouse. The projected levelized unit cost of energy from the mitigated project, coming on-line in 1990, is estimated to be approxi-

mately 71.1 mills per kWh, and therefore the project would be economically beneficial.

Exhibits

Exhibit A and the following exhibit F drawings conform to the Commission's rules and regulations and are approved and made a part of any license issued.

Exhibit A: Table A-2 of the application, filed on July 1, 1985.

Exhibit	*FERC Drawing No.*	*Showing*
F-1	2973-15	Site Plan Revised 8/19/87
F-2	2973-16	Penstock Profile/Intake Details Revised 2/26/87
F-3	2973-17	Powerhouse Section Revised 8/18/87
F-4	2973-18	Powerhouse Floor Plan Revised 8/18/87
F-6	2973-19	Tailrace Aeration Schematic Revised 9/30/87

[¶ 62,042]

Gaynor L. Bracewell, Project No. 3102-004

Order Amending License

(Issued October 20, 1988)

J. Mark Robinson, Dir., Division of Project Compliance and Administration.

On February 29, 1988, the licensee for the High Shoals Project filed an application for amendment of the license for Project No. 3102.[1] The licensee proposes to temporarily modify the mode of project operation by using flows from the Lower Dam on the Apalachee River in Walton, Morgan, and Oconee Counties, Georgia. Upon completion of construction, the project will use flows from the Upper Dam on the Apalachee River, as licensed.

The licensee states that the proposed modification will allow the project to begin generation before the end of 1988, which will facilitate additional financing to complete the project.

No modification to the structural features of the project will be required. Water will be released from the Lower Dam impoundment through an existing gate.

The licensee also requested approval for the installation of a 27-kilowatt (kW) generator in addition to the licensed 1,000-kW generator. The small unit will provide partial minimum flows and will make use of low-flow periods.

By letter dated July 20, 1988, the U.S. Fish and Wildlife Service (FWS) proposed conditions for the temporary mode of operation to protect fish and wildlife resources. The conditions provide for a minimum flow release of 18 cubic feet per second (cfs), a minus 3-foot limit on water level fluctuations in the lower reservoir, the installation of gages to measure reservoir inflow and minimum flow releases, and performance of the instream flow study required by article 20 of the license. The licensee agrees to the FWS conditions. The Georgia Department of Natural Resources (GDNR) has no objections to the proposed project modification or FWS conditions.

The licensee's implementation of the FWS July 20, 1988 conditions would provide adequate protection for fish and wildlife resources in the Apalachee River during the temporary mode of operation. Therefore, the license is being amended to require the licensee to abide by these conditions. Further, the filing requirement of article 20 of the license is being extended by one year.

Based on the information contained in the application, the Director finds that the proposed modification would not result in adverse environmental impacts other than those identified in the order issuing license. This amendment does not constitute a major federal action significantly affecting the quality of the human environment.

The Director orders:

(A) Ordering Paragraph (B)(2) of the Order Issuing License for Project No. 3102 is amended as follows:

The powerhouse description is revised to read, "a powerhouse with an installed generating capacity of 1,027 kW;"

(B) The deadline for complying with the requirements of article 20 of the license is extended to one year from the date of issuance of this order.

[1] 16 FERC ¶ 62,030 (1981).

950804-0283

950804-0283

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Fall River Rural Electric Cooperative, Inc.

Project No. 2973-063 & -072
Idaho

ORDER MODIFYING, AND APPROVING WATER QUALITY MONITORING AND PROJECT OPERATIONS PLAN, AND AMENDING LICENSE ARTICLES

AUG - 2 1995

On May 17, 1994, Fall River Rural Electric Cooperative, Inc. (licensee) filed a water quality (WQ) monitoring and project operations plan, under article 107 of the license for the Island Park Hydroelectric Project. Article 107 requires that the licensee monitor dissolved oxygen (DO), water temperature, total gas pressure (TGP), and turbidity of the flows released to the Henry's Fork of the Snake River during project operation. In addition, article 107 required the licensee to develop operations response procedures to maintain the standards set based on the year of pre-project monitoring. Article 107 required the licensee to consult with the Forest Service (FS), the U.S. Fish and Wildlife Service (FWS), the Idaho Department of Fish and Game (DFG), and the Idaho Department of Health and Welfare (DHW) in preparing the plan. The plan must be approved by the FS prior to filing with the Commission for approval.

On March 10, 1995 the licensee supplemented the WQ monitoring plan and recommended changes to the plan and to license articles 107 and 402. The licensee filed one year of WQ monitoring data with the recommendations.

Background

Article 107 required the water quality monitoring and project operations plan include, but not be limited to, the following provisions: a) monitoring the four WQ parameters at all times during project operation; b) water released must conform to the normal releases and schedule that the U.S. Bureau of Reclamation (BOR) uses; and c) the WQ of project releases must be the same quality had the water been released from the Island Park Reservoir through the BOR gates. The plan is to be implemented by a combination of full-time operators and automated systems, and the licensee must also maintain the four WQ parameters during construction and operation within the following limits:

1) DO concentration minimum of 6 milligrams per liter (mg/l) (state standard);
2) Water temperature, from April through October not to exceed 17° Celsius (C) maximum, and from November through May not to exceed 3°C minimum;

3) Total gas pressure not to exceed 110 percent (state standard); and
4) Turbidity not to exceed 5 nephelometric turbidity units.

The licensee is required by article 107 to alter or cease project operation until conditions would provide WQ according to these prescribed limits during project operation. The licensee may release water through the project that does not meet the set standards during certain periods, but such releases must be approved, in advance, on a case-by-case basis, by the FS, the FWS, the DFG, and the DHW. Article 107 further requires the project operations plan to contain a reaction time to employ corrective measures, to include cessation of project operation, and the estimated time it would take for the measures to be effective.

Additional WQ requirements in the license include article 401 and 402. Article 401 requires the maintenance of a DO concentration in the Henry's Fork of 7 mg/l, or the DO level as monitored at the BOR outlet structure. In the Environmental Assessment (EA), attached to the project license, based on the pre-project monitoring, staff determined that 7 mg/l better represented the existing conditions than the FS 4(e) conditions.[1] Therefore, in the EA, staff determined that, "although the FS section 4(e) conditions stated that a minimum DO of 6 mg/l was acceptable, a minimum DO of 7 mg/l would better enhance the downstream fishery," and included article 401 in the project license. Article 402 requires that the licensee operate the project so that the project outflows have a water temperature between 3°C and 17°C, inclusive for the purpose of maintaining state standards for this WQ parameter.

Licensee's Proposed Plan

The licensee used the results of a pre-project monitoring study to assist in developing the proposed WQ monitoring plan. The licensee proposes to continue to monitor DO, temperature, TGP, and turbidity. Monitoring would be done automatically and continuously with hourly recordings of calculated averages.

The monitoring equipment was installed in 4 locations for the pre-operational monitoring, all recording DO, TGP, turbidity, and temperature. The 4 stations monitor the reservoir bottom from the penstock (X1), at the outflow of the BOR gates (X2), at the downstream end of the aeration basin (X3), and 500 feet downstream at the USGS gaging station (X4). The readings at the

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[1] Environmental Assessment for the Island Park Project No. 2973, prepared by the Federal Energy Regulatory Commission, Office of Hydropower Licensing, Division of Project Review, Washington D.C. Issued September 29, 1988. (section V.B.2.c.)

four stations are expected to be the same at all times to show that the project is not affecting the WQ of the outflow from the Island Park Reservoir.

The monitoring system will use redundant equipment at stations X2 and X3. The licensee will stockpile spare equipment and parts to ensure continual operation of the system. The equipment will be calibrated weekly (temperature and TGP), annually (turbidity), or every three days (DO). Maintenance will be done every 2 weeks (DO, TGP, and temperature) or weekly (turbidity).

The licensee described three reservoir WQ integrity categories and how the categories would effect project operation. The licensee identified these categories as acute (red), chronic (yellow), and normal (green), (Table 1). The licensee's response to red conditions would be to immediately shut down the project and shift all flows to the BOR gates. Yellow conditions would require either an immediate shutdown, or a shutdown within 12 hours of the alarm, if conditions are not correctable. Green conditions would require either an immediate shutdown, or a shutdown within 24 hours of the alarm, if conditions are not correctable. Turbidity is not included in the chart because changes in turbidity are not related to the other three WQ parameters. If turbidity approached the allowed limit, the licensee would institute a red condition response as required by license article 107.

Table 1. WQ parameter limits to determine operational responses.

	Conditions		
WQ Parameters	Red	Yellow	Green
DO	<7.0 mg/l	≥7.0 mg/l	≥8.5 mg/l
Temperature	<3° or >17°C	15° to 1,°C	3° to 15°C
TGP	>110%	105% to 110%	<100%

The licensee stated that they would file monthly WQ reports with the consulted agencies. Further, the licensee would have quarterly meetings with the Island Park Advisory Committee, and annual meetings with the FS, to discuss the past year of project operation.

Licensee's Supplemental Recommendations

In the March 10, 1995 supplemental filing the licensee recommended that the WQ monitoring plan be changed to require the point of compliance for DO be moved from station X2 to station X4. The year of WQ data indicated that the operation of the

power plant was affecting the readings at station X2 which should have been independent of the project discharge. The licensee recommended dropping DO matching between stations, and instead monitoring DO under the fixed criteria of the required range, under license articles 107 and 401, at station X4.

The licensee requested that articles 107 and 402 be modified to change the required range for the project discharge water temperature at station X3. The licensee requested that the new requirement should be to maintain the project outflow so that water temperatures at station X4 do not exceed those measured at station X1 by more than 1°C.

Agency Comments

Letters from the DHW, dated January 28, 1994, the BOR, dated January 21, 1994, and the FWS, dated January 11, 1994, all concurred with the plan. The DFG did not provide comments on the plan. The licensee incorporated the minor changes that were requested into the above plan. The FS approved the plan by letter dated May 10, 1994.

Letters from the DFG, dated April 10, 1995, the FWS, dated April 3, 1995, and the FS dated June 1, 1995, all concurred with the licensee's recommendations to modify the WQ plan and to amend articles 107 and 402.

Discussion and Conclusions

The licensee presented adequate WQ data illustrating the excessive constraint of the article 107 and 402 water temperature range requirements. The requirements do not allow the licensee to operate the project during periods when the BOR gates' water temperatures would exceed the allowed water temperature range. These requirements also restricted the licensee more than the intended requirement of article 107 not to discharge flows that vary in WQ significantly from the WQ of flows released from the BOR's gates. The restriction of articles 107 and 402 require the licensee to cease generation due to discharge water temperatures in excess of 17°C. The discharge must then be diverted through the BOR gates which does nothing to change the water temperature of the outflows. Therefore, since the reservoir and its outflow typically experience water temperatures above 17°C, outside the influence of the project operation, the licensee's request to amend the allowed water temperature range of articles 107 and 402 should be approved.

The licensee's supplemented monitoring plan should provide adequate protection to the downstream fisheries resources. The licensee's plan was designed to be proactive to anticipate possible problems with WQ and take preventative actions to avert the problem's occurrence. The downstream reaches of the Henry's

Fork are considered to be a world class blue ribbon trout fishery. This fishery has an economic value to the area of several million dollars annually.[2] It is therefore important that the project actively maintain these WQ values for the protection and enhancement of the salmonid populations of the Henry's Fork.

The licensee developed a WQ monitoring plan that would continuously and diligently monitor four WQ parameters in the reservoir and the tailrace of the project. The licensee also developed a project operations plan that would respond automatically to changes in these WQ parameters. This type of monitoring, when tied into the operation of the project, should assist the licensee in releasing water from the project that is of the same quality had the water been released from the BOR gates.

The licensee's plan should ensure compliance with articles 107, 401, and 402 (as amended) by continuously monitoring the WQ of the flows through the project and within the reservoir from 4 locations. The licensee's proposed WQ monitoring system should allow the licensee to maintain complete control of WQ of the project outflows and provide the records required under article 107. However, if any of the WQ parameters, as recorded by the approved monitoring system, exceed the levels permitted by articles 107, 401, or 402, the licensee should file a report with the Commission within 30 days of the incident. The report should, to the extent possible, identify the cause, severity, and duration of the incident, and any observed or reported adverse environmental impacts resulting from the incident. The report should also include: 1) operational data necessary to determine compliance with articles 107, 401, and 402; 2) a description of any corrective measures implemented at the time of occurrence and the measures implemented or proposed to ensure that similar incidents do not recur; and 3) comments or correspondence, if any, received from the resource agencies regarding the incident Based on the report and the Commission's evaluation of the incident, the Commission should reserve the right to require modifications to project facilities and operations to ensure future compliance.

The licensee's plan, filed on May 17, 1994, and supplemented on March 10, 1995, for ensuring and recording compliance with articles 107, 401 and 402, adequately fulfills the requirements of the project license. Therefore, the licensee's water quality monitoring and project operation plan, filed on May 17, 1994, and supplemented on March 10, 1995, under article 107 of the Island Park Hydroelectric Project license, with the modifications discussed above, should be approved.

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[2] EA. (section VI.B.3.)

The Director orders:

(A) The licensee's water quality monitoring and project operations plan, filed on May 17, 1994 and supplemented on March 10, 1995, under article 107 of the Island Park Hydroelectric Project license, as modified by paragraph (C), is approved.

(B) The water temperature range requirements of license articles 107 and 402 are amended as follows:

> The licensee shall maintain the water temperature of the project outflows at monitoring station X4 not to exceed the water temperature measured at station X1 by more than 1°C at all times.

(C) If any of the WQ parameters, as recorded by the approved monitoring system, exceed the levels permitted by articles 107, 401, or 402, the licensee shall file a report with the Commission within 30 days of the incident. The report shall, to the extent possible, identify the cause, severity, and duration of the incident, and any observed or reported adverse environmental impacts resulting from the incident. The report shall also include: 1) operational data necessary to determine compliance with articles 107, 401, and 402; 2) a description of any corrective measures implemented at the time of occurrence and the measures implemented or proposed to ensure that similar incidents do not recur; and 3) comments or correspondence, if any, received from the resource agencies regarding the incident. Based on the report and the Commission's evaluation of the incident, the Commission reserves the right to require modifications to project facilities and operations to ensure future compliance.

(D) Unless otherwise directed in this order, the licensee shall file an original and seven copies of any filing required by this order with:

> The Secretary
> Federal Energy Regulatory Commission
> Mail Code: DPCA, HL-21.1
> 825 North Capitol Street, N.E.
> Washington, D.C. 20426

In addition, the licensee shall serve copies of these filings on any entity specified in this order to be consulted on matters related to these filings. Proof of service on these entities shall accompany the filings with the Commission.

(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 C.F.R. § 385.713.

J. Mark Robinson
Director, Division of Project
Compliance and Administration

78 FERC ¶ 62,091

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Fall River Rural Electric Cooperative, Inc.) Project No. 2973-083

ORDER AMENDING RAMPING RATE MONITORING PLAN

FEB 06 1997

On July 19, and supplemented on December 26, 1996, the Fall River Rural Electric Cooperative, Inc. (licensee) filed a revised Annual Ramping Rate Report for the Island Park Hydroelectric Project pursuant to article 403 and the Order Modifying and Approving Ramping Rate Monitoring Plan. 1/ The licensee's filing included annual ramping rate data for 1995 and requested a modification of the approved ramping rate monitoring plan.

BACKGROUND

Under article 403, the licensee is required, in part, to limit the rate of change in river flow (ramping rate) from the Island Park Dam Project to 50 cubic feet per second (cfs) every half-hour when upramping and 50 cfs every half-hour when downramping during the hours of 7 p.m. and 5 a.m.

During 1995, there were a total of 57 flow changes from the Island Park reservoir. Eleven of the flow changes were made at the U.S. Bureau of Reclamation's low level outlet gates and the remaining 46 flow changes were made through the Island Park Hydroelectric Project. The exemptee's July 19 annual report included graphs of the 46 ramping rate events. Of those 46 events, 30 exceeded the requirements of article 403.

After review of the data, the Commission concluded, by letter dated November 25, 1996, that the licensee violated article 403 on a number of occasions. In order to prevent similar occurrences in the future, the licensee proposed two modifications to the ramping rate monitoring plan. The licensee proposed to: (1) target flow changes at 30-35 cfs per half-four instead of 50 cfs; and (2) implement a standard deviation of ± 0.03 feet for reading the level transducer data at station X-4.

AGENCY COMMENTS

On June 20, 1996 a meeting of the Island Park Advisory Committed was held. At that time the ramping rate violations were discussed along with the various mechanical restrictions and the complications created by multiple release locations.

1/ 70 FERC ¶ 62,155 (1995).

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DC-A-4

The participants also discussed how the standard operating procedures could be modified to ensure compliance.

By letters dated August 6, September 5, and December 19, 1996, respectively, the Idaho Department of Fish and Game, the U.S. Fish and Wildlife Service, and the U.S. Forest Service stated that they reviewed the revised ramping rate report, along with the licensee's proposal, and it accurately reflected the agreements reached at the June 20 meeting. The resource agencies concurred with the licensee's proposal to revise the ramping rate monitoring plan.

DISCUSSION

Currently, a water level transducer gage, located approximately 600 feet downstream from the project, is used to continuously monitor flows released from the project. The transducer measures the stage (or height) of the river and through a simple relation between stage and discharge, streamflow (in cubic feet per second) is calculated. In order to determine the licensee's compliance with article 403, the difference between changes in flow, over any half hour, is calculated for both upramping and downramping events.

During 1995, a total of 46 flow changes were made at the project. The licensee stated that some of the flow changes exceeded the required rate by a stage reading of only one or two hundredths of an inch. Although one or two hundredths of an inch seems like a small exceedence, depending on the overall flow of the river, it could be a significant proportion of the ramping rate requirement. For instance, when total river flow is approximately 300 cfs, a change in river elevation of two hundredths of an inch equals approximately 12 cfs; and at flows of 3,000 cfs, a change in river elevation of two hundredths of an inch equals approximately 22 cfs which is approximately 45 percent of the ramping rate requirement. The licensee's proposal of ± 0.03 feet equals approximately 17 to 32 cfs.

The licensee stated that in order to prevent exceedences of the 50 cfs requirement, operating personnel have been instructed to target flow changes at the Island Park Project to 30-35 cfs per half-hour. Previously, the operators would target flow changes at the maximum allowable rate (50 cfs per half-hour) and, as a result, occasionally exceeded the requirement. By lowering the operational target to 35 cfs, any small breach above 35 cfs would likely be below the 50 cfs requirement and, therefore, not a violation of article 403. Should the licensee accidently exceed the 50 cfs limit, the licensee proposed that the ± 0.03 feet range be used to determine their compliance with the requirement.

CONCLUSION

Article 403 was required to protect recreational users, the fishery, and other natural resources such as waterfowl, raptors and aquatic wildlife below the project. 2/ Rapid alteration in downstream flows could adversely impact these resources. The licensee proposed a two-tier approach to maintain and determine compliance with article 403. By targeting flow changes at 30-35 cfs, the licensee has implemented, on their own, a cushion on 15-20 cfs in order to meet the 50 cfs per half-hour requirement. Based on review of the ramping rate data, that change alone should improve compliance with article 403. The implementation of a deviation of ±0.03 feet for the level transducer reading at station X-4 should eliminate any exceedences over the 50 cfs per half-hour requirement caused by mechanical restrictions or gage variance.

Therefore, the licensee's proposal to target flow changes at 30-35 cfs, and incorporate a deviation of ±0.03 feet when computing ramping rate changes per half-hour should be approved and the Ramping Rate Monitoring Plan accordingly modified. The Commission should reserve the authority to modify the Ramping Rate Monitoring Plan, based on the review of annual ramping rate data, to ensure compliance with article 403.

The Director Orders:

(A) The proposed modifications, filed on July 19 and supplemented on December 26, 1996, by the Fall River Rural Electric Cooperative, Inc. (licensee), to amend the Order Modifying And Approving Ramping Rate Monitoring Plan for the Island Park Project, are approved.

(B) The licensee shall target flow releases from the Island Park Project at 30 to 35 cubic feet per second (cfs) per half-hour to avoid exceeding the required 50 cfs ramping rate per half-hour requirement.

(C) The second paragraph of Ordering Paragraph (B) of The Order Modifying And Approving Ramping Rate Monitoring Plan shall read as follows:

> Before submitting the monthly reports, the licensee shall review the data and identify all instances when the ramping rate requirements of article 403, ±0.03 feet, were not maintained. If the licensee identifies a violation, ...

2/ Environmental Assessment for the Island Park Project. Federal Energy Regulatory Commission, September 29, 1988.

(D) The Commission reserves the right to require modifications to the project facilities and operations to ensure compliance with article 403.

(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 C.F.R. § 385.713.

J. Mark Robinson
Director, Division of
Licensing and Compliance

20030417-3037 Issued by FERC OSEC 04/17/2003 in Docket#: P-2973-108

UNITED STATES OF AMERICA 103 FERC ¶ 62,031
FEDERAL ENERGY REGULATORY COMMISSION

Fall River Rural Electric Cooperative, Inc. Project No. 2973-108

ORDER AMENDING LICENSE ARTICLE 107

(Issued April 17, 2003)

On January 13, 2003, supplemented March 28, 2003, Fall River Rural Electric Cooperative, Inc. (Licensee) filed a request to amend article 107 of the license for its Island Park Hydroelectric Project.[1] Article 107 requires water quality monitoring and mitigation below the project. The project is located on the Henry's Fork of the Snake River, in Fremont County, Idaho

LICENSE ARTICLE 107

Article 107 of the project license was submitted by the U.S. Forest Service (FS) and made a part of the license under Section 4(e) of the Federal Power Act.[2] Article 107 requires water quality monitoring and mitigation at the project. The article states, in its thirteenth paragraph, that "Implementation for the monitoring and mitigation procedures plan will be by full-time project operator and automated systems. The full-time operator will be on-site for eight hours a day, seven days a week, and will be on-call 24 hours a day, seven days a week, with a response time of within 30 minutes." The article indicates that monitoring and mitigation shall be facilitated by automated systems to the extent possible. The article requires that the licensee maintain fully operational monitoring and mitigation systems at all times during project operation, and that these systems be operated, maintained, or renewed as necessary to ensure that specified critical water quality limits are not exceeded.

LICENSEE'S AMENDMENT REQUEST

The licensee requests that article 107 be amended to eliminate the requirement that a full-time operator be on-site for eight hours a day, seven days a week.

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[1] Order Issuing Major License and Dismissing Preliminary Permit with Prejudice, 45 FERC ¶ 62,041 (1988).

[2] See 16 USC. 791a - 825r.

The licensee says that experience shows that compliance could be maintained without a full-time operator at the facility. The project and its monitoring systems operate in an automated or supervisory control mode. The licensee indicates that operating personnel would continue to be on-call 24 hours a day, seven days a week, with a response time of 30 minutes. The requirement for a 30-minute response time would continue to be met by operating personnel being within 30 minutes travel-time of the project, who can be notified via telephone by automated project systems in the event of deviations from normal operation.

RESOURCE AGENCY CONSULTATION

The licensee provided draft copies of the amendment request to federal and state resource agencies and other interested parties. The amendment request filed with the Commission contained copies of communications with the Idaho Department of Fish and Game (IDFG), FS, U.S. Army Corps of Engineers (COE), and U.S. Fish and Wildlife Service (FWS). Letters from the FS and IDFG, dated August 13 and September 6, 2002, respectively, indicate that the two agencies have no objections to the amendment request. An August 26, 2002 electronic mail from the COE indicates that, because no additional discharges are being proposed, no actions concerning the COE are required. The COE indicated that it had communicated with the Idaho Department of Environmental Quality (IDEQ) concerning the draft amendment, and that the IDEQ had no objection. The licensee contacted the FWS seeking any comments on the draft amendment request via telephone on August 12, 2003. The FWS indicated to the licensee that they would not be providing any comments on the amendment request.

DISCUSSION AND CONCLUSIONS

Approval of the licensee's request to amend license article 107 to eliminate the requirement that a full-time operator be on-site at the project for eight hours a day, seven days a week should not affect water quality monitoring or maintenance at the project. A review of the project's annual water quality reports submitted to the Commission for 1999, 2000, and 2001 do not reveal any significant problems regarding monitoring or maintenance of water quality. Project automation and the retention of on-call project operators should continue to protect the water quality of the Henry's Fork of the Snake River. The licensee's amendment request should be approved.

The Director orders:

(A) The licensee's request to amend article 107 of the Island Park Hydroelectric Project license, filed January 13, 2003 and supplemented March 28, 2003, is approved. The first two sentences of the thirteenth paragraph of license article 107 are replaced by the following two sentences:

"Implementation for the monitoring and mitigation procedures plan will be by the project's automated systems. Operating personnel will be on-call 24 hours a day, seven days a week, with a response time of within 30 minutes."

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

George H. Taylor
Chief, Biological Resources Branch
Division of Hydropower Administration
and Compliance

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: Island Park Hydroelectric Project, FERC Project #2973, Article 104

Dear Ms. Bose,

In compliance to Article 104 of the license for the Island Park Hydroelectric Project, FERC Project #2973, 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 Island Park Hydroelectric Project to be in compliance with the terms and conditions of the Special Use Permit and Article 104 of the License, for the year 2012, 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.

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 Services, Inc.
P.O. Box 535
Rigby, ID 83442

Dear Brent;

The Island Park 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)

FEDERAL ENERGY REGULATORY COMMISSION

WASHINGTON, D. C. 20426

Project No. 2973-082--Idaho
Island Park Hydroelectric Project
Fall River Rural Electric

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

NOV 25 1996

Mr. Brent Smith
Northwest Power Services, Inc.
P.O. Box 535
4110 East 300 North
Rigby, ID 83442

Dear Mr. Smith:

This concludes our review of your compliance with the ramping rate requirement under license article 403 for the Island Park Project. Article 403 requires, in part, that the rate of change in river flow not exceed 50 cubic feet per second (cfs) per half-hour when upramping and 50 cfs per half-hour when downramping during the hours of 7 p.m. and 5 a.m.

Background

On May 29, 1996 you filed your annual ramping rate report for 1995. The report stated that there were a total of 57 flow changes from the Island Park Reservoir. The report added that the flow changes were made either at the Island Park Project or at the U. S. Bureau of Reclamation's (BR) low level outlet gates. Staff's review of the data indicated 39 instances when the flow changes did not meet the ramping rate requirement. The May 29 report did not provide any explanation for the exceedences.

In a revised ramping rate report, filed July 19, 1996, you stated that 46 of the 57 flow changes were made through the Island Park Project with the remaining changes made at the BR's gates. You explained that there were several reasons for exceeding the ramping rate requirement at the Island Park Project. You stated that in some cases the flow changes exceeded the requirement by a reading of one or two hundredth's of an inch at the flow gaging station (one hundredth of an inch equals approximately 5 to 10 cfs). You also stated that some flow changes did not meet the ramping rate requirement due to mechanical restrictions when splitting flow between two units or transferring all flow to one unit. Finally, you stated that some exceedences were due to flow releases over the spillway, weather and releases from the BR's low level outlet gates.

Discussion

On June 20, 1996, a meeting of the Island Park Advisory Committee was held. At that time, you discussed various alternatives to ensure compliance with the ramping rate

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NOV 25 1996

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requirement. Your revised July 19 ramping rate report described the alternatives that were discussed at the meeting and contained two recommendations: you proposed to target flow changes at 30-35 cfs per half-hour instead of 50 cfs per half-hour; and implement a standard deviation of ± 0.03 feet for the transducer readings at station X-4.

Your first recommendation does not effect the Order Modifying and Approving Ramping Rate Monitoring Plan (Ramping Rate Order). 1/ Your second recommendation, however, does propose a significant change to the order, therefore, it will be addressed under a separate Commission proceeding.

You stated that some of the exceedences were only one to two hundredths of inch over the requirement with wind or spillage accounting for some additional exceedences. The ramping rate data indicated that river flow ranged from approximately 300 cfs to 3,000 cfs. If the total river flow is approximately 300 cfs, two hundredths of an inch equals approximately 12 cfs, and at flows of 3,000 cfs, two hundredths of an inch equals approximately 22 cfs. Although one to two hundredths of an inch doesn't seem like a large exceedence, the actual volume is a significant percentage over the required 50 cfs.

You also stated that some of the ramping rate exceedences were caused by mechanical limitations of the turbines when transferring flows between units. Article 403 requires a ramping rate of 50 cfs per half-hour. Your annual ramping rate report demonstrated that the project's equipment is capable of meeting the requirements of article 403. If you discovered some limited physical capabilities of your equipment, several options are available to you. You can discontinue the operating procedure that has mechanical limitations, use that operating procedure only when conditions are favorable for not violating article 403, or request an amendment of article 403 so that the mechanical limitation are surmounted.

Conclusion

Article 126 states that the operation of the Island Park Project shall not interfere with the use, storage, or release of water from the Island Park Reservoir and shall be subordinate to the operating standards of the BR. Of the 57 total flow changes made at the project during 1995, you identified 11 changes made at the BR's low level gates. Those changes were excluded from our review for compliance with article 403.

However, review of the 46 flow changes made at the Island Park Project indicated that 30 flow changes exceeded the ramping

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1/ 70 FERC ¶ 62,155 (1995).

rate requirement. The average flow change for the 30 exceedences was approximately 76 cfs or 50 percent higher than the required limit. At the time the flow changes were made, the total river flow ranged from approximately 300 to 3,000 cfs.

Therefore, after review of the available information, we have concluded that the 30 flow changes exceeding the 50 cfs per half-hour requirement were in violation of article 403. Your proposal to target flow changes at 30-35 cfs per half-hour instead of 50 cfs per half-hour should ensure future compliance with article 403. These violations will be made a part of the compliance history for the project. No penalties or enforcement action will be recommended at this time.

Thank you for your reports and cooperation during our review. If you have any questions regarding this matter, please contact Mr. T. J. LoVullo at (202) 219-1168.

Sincerely,

J. Mark Robinson
Director, Division of
Licensing and Compliance

cc: Mr. Al Bolin
U.S. Bureau of Reclamation
1150 North Curtis Road
Boise, ID 83706

Mr. Charles Lobdell
U.S. Fish and Wildlife Service
4696 Overland Road, Room 576
Boise, ID 83705

Mr. John Pruess
U.S. Forest Service
420 North Ridge Street
St. Anthony, ID 83445

Mr. Will Reid
Idaho Department of Fish and Game
600 South Walnut
Boise, ID 83707

Mr. Dee Reynolds
Fall River Rural Electric
P.O. Box 830
714 Main Street
Ashton, ID 83420

APPENDIX B

RESOURCE AGENCY 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
Wade Vagias	National Park Service	Superintendent Craters of the Moon National Monument & Preserve	PO Box 29		Arco	ID	83213	208-527-1310	wade_vagias@nps.gov	12/20/2016	Project compliance Review	Good ongoing relationship.
Susan Rosebrough	National Park Service	NPS Hydro Assistance Program	909 First Ave.		Seattle	WA	98104	206-220-4121	susan_rosebrough@nps.gov	12/20/2016	Project Compliance Review	Good ongoing relationship.
Tom Bassista	Idaho Department of Fish and Game	Environmental Staff Biologist	4279 Commerce Circle		Idaho Falls	ID	83401	208-525-7290	thomas.bassista@idfg.idaho.gov	12/19/2016	Follow Up for Comments on Project Review	Good ongoing relationship.
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	12/15/2016	Montana Tenant Method Analysis Review	Good ongoing relationship.
Michael Morse	US Fish & Wildlife Service	FERC/Hydro	4425 Burley Drive	Suite A	Chubbuck	ID	83202	208-378-5261	michael_morse@fws.gov	11/29/2016	Project Compliance Review	Good ongoing relationship.
Mark Bingman	U.S. Forest Service	Natural Resource Specialist	P.O. Box 858		Ashton	ID	83420	208-652-1228	mbingman@fs.fed.us	11/18/2016	Project Compliance Review	Good ongoing relationship.
Gary Vecellio	Idaho Department of Fish and Game	Environmental Staff Biologist	4279 Commerce Circle		Idaho Falls	ID	83401	208-525-7290	gary.vecellio@idfg.idaho.gov	9/16/2015	Project Compliance Review	Good ongoing relationship.
Adam Straubinger	Idaho Department of Parks and Recreation	Park Planner	5657 Warm Springs Ave		Boise	ID	83716	208-514-2457	adam.straubinger@idpr.idaho.gov	8/31/2015	Project Compliance Review	Good ongoing relationship.
Ethan Morton	Idaho State Historic Preservation Office	Compliance Archaeologist	210 Main Street		Boise	ID	83702	208-334-3861	ethan.morton@ishs.idaho.gov	8/25/2015	Project Compliance Review	Good ongoing relationship.

APPENDIX C

FACILITY DESCRIPTION

1.0 PROJECT DESCRIPTION

Island Park Dam, Reservoir, and Hydroelectric Project are located on the Henry's Fork, a tributary of the Snake River in Idaho, approximately 0.4 miles upstream of the confluence with the Buffalo River. The Project is located in eastern Idaho within the Island Park District of the Targhee National Forest; the reservoir covers 7,794 acres within the Forest. The headwaters of the Henry's Fork River begin 31 miles above the dam, at Henry's Lake.

The Island Park Dam was constructed in 1939 by the USBR. The Island Park Hydroelectric Project (FERC No. 2973) was licensed in 1988 and constructed between September 1992 and July 1994 on the existing USBR Island Park Dam. The Hydroelectric Project consists of the screened intake structure with 3/8 inch openings, approximately 720 feet of a 10-foot diameter penstock, a concrete masonry powerhouse with two vertical Francis turbines/generators and associated controls, one 500 hp. centrifugal blower, one 250 hp. positive displacement blower, one 200 hp. variable speed blower with associated controls, a 60' x 100' aeration basin, and a concrete masonry valvehouse located on top of the dam. The aeration basin, powerhouse, and a small section of the buried penstock are located at the base of the Island Park Dam. The land occupied by project facilities is under the jurisdiction of the U.S. Forest Service (USFS); the hydroelectric project operates under a special use permit issued to the licensee by the USFS, dated April 23, 1992. The total acreage of USFS lands affected by project features is 1.2 acres. The Island Park Hydroelectric Project utilizes waters diverted from the Island Park Reservoir under the direction of the Fremont-Madison Irrigation District and the USBR.

Reservoir Operations

Island Park Dam is a 9,448-foot long earthfill structure with a maximum height of 91 feet. The Dam provides 127,265 acre-feet of storage for irrigation demands by the Fremont-Madison Irrigation District.

The other considerations in the operation of the reservoir are water rights, the system operating goal of holding water in upstream space, and opportunity to exchange stored water with other reservoirs to accomplish multipurpose objectives. The reservoir is full at an elevation of 6,303 feet, with a surface area of approximately 8,084 acres. The reservoir is filled no later than April 1 of each year; releases for irrigation occur during the spring and summer months

(particularly July and August). The Island Park Dam releases water downstream through an outlet tunnel (3,400 cfs capacity) at the base of the dam. Water reaches this tunnel by two means: through a low level (6,239 elevation, reservoir bottom) intake in the reservoir, and through a "bathtub" spillway at elevation 6,302 adjacent to the dam (There is no "spill" over the top of the dam or other releases from the face of the dam). Under normal operating conditions, the uncontrolled "bathtub" spillway is utilized when the reservoir exceeds an elevation of 6,302 feet (spillway crest elevation). The water elevation over the spillway height of 6,302 feet determines the amount of outlet flow downstream. Starting in the fall, releases through the outlet tunnel are reduced to ensure that the reservoir surcharges to at least 6,303 feet by April 1. The outlet tunnel may be closed completely with all water leaving the reservoir from the surface spillway. Total USBR outlet flows are comprised of the sum of the uncontrolled spill and the low-level outlet gate openings.

Hydroelectric Project Operation

The Island Park Hydroelectric Project operates with water diverted though a screened intake near the bottom of the reservoir. The water is piped through the Island Park Dam into the Island Park powerhouse constructed at the base of the dam. After leaving the powerhouse, water is released through a tailrace into an "aerating basin" where blowers are used to aerate the tailrace releases (low in dissolved oxygen since they originated from near the bottom of the reservoir).

Because the USBR has complete control over releases from the dam, the Project does not release a required minimum flow. Project does target ramping rate flow releases of 30 cfs - 35 cfs per half hour and releases no greater than 50 cfs per half hour.

Rubber Dam Addition

In 1995, Fall River built an adjustable rubber collar or dam at the spillway of the Island Park dam. This rubber dam is not part of the FERC-licensed facility, but was built for the purposes of maximizing power generation at the Island Park Hydroelectric Project within the constraints of the USBR reservoir operation. By providing this rubber collar around the spillway, the reservoir can surcharge above the spillway crest without having to close the Hydroelectric Project intake. In other words, the addition of the rubber dam maintains the reservoir elevation at 6,303 feet during spill periods, but instead of spilling the additional water above 6,302 elevation into the USBR outlet tunnel, a portion of the previously spilled water can now be diverted through the

hydroelectric plant (via the Island Park intake near the reservoir bottom). Once the last 12 inches of the reservoir is filled (to 6,303), the flow over that amount can be released first through the powerplant outlet (up to a maximum 960 cfs), and any further overflow can be released through the spillway or into the USBR intake on the reservoir bottom, depending on the desired temperature mix. The rate of outflow is determined by the reservoir elevation and the spillway rating curve. Total discharge from the reservoir and reservoir elevation is not changed. Besides providing the opportunity for Island Park to maximize hydropower production, the rubber dam allows Island Park Hydroelectric Project operators to mix water released from the bottom of the reservoir (their intake) with water released from the surface of the reservoir (through the spillway), providing an opportunity to optimize water temperature for downstream fish habitat requirements.

There are two operational scenarios that occur during the spill period (reservoir elevation between 6,302 and 6,303 feet):

(1) If the reservoir is ice covered, bottom water rather than surface water is released through the penstock to the powerplant. The powerplant's tailrace waters flow through a tailrace basin where the water is aerated if necessary. Releasing 4 degree C bottom water rather than 0 degree C surface water during ice cover increases the winter degree days benefiting the aquatic community in the river downstream.

(2) When the reservoir is ice free, a minimum surface spill of 180 cfs applies at all times that the reservoir is between elevations 6,302 and 6,303 feet. Any flows greater than 180 cfs are released as bottom water through the powerplant and aerated if necessary. This mixing of surface and bottom water provides warmer outflows than would occur with strictly bottom water releases, but result in cooler outflows than previously existed during the ice-free portion of the spill period.

2.0 PHOTOS

Photo 1. Project Overview

Photo 2. Downstream View of Dam, Powerhouse, and Fisherman Access Walkway

Photo 3. Aeration Basin at Powerhouse

Photo 4. Tailrace (View from Powerhouse)

3.0 MAPS & DIAGRAMS

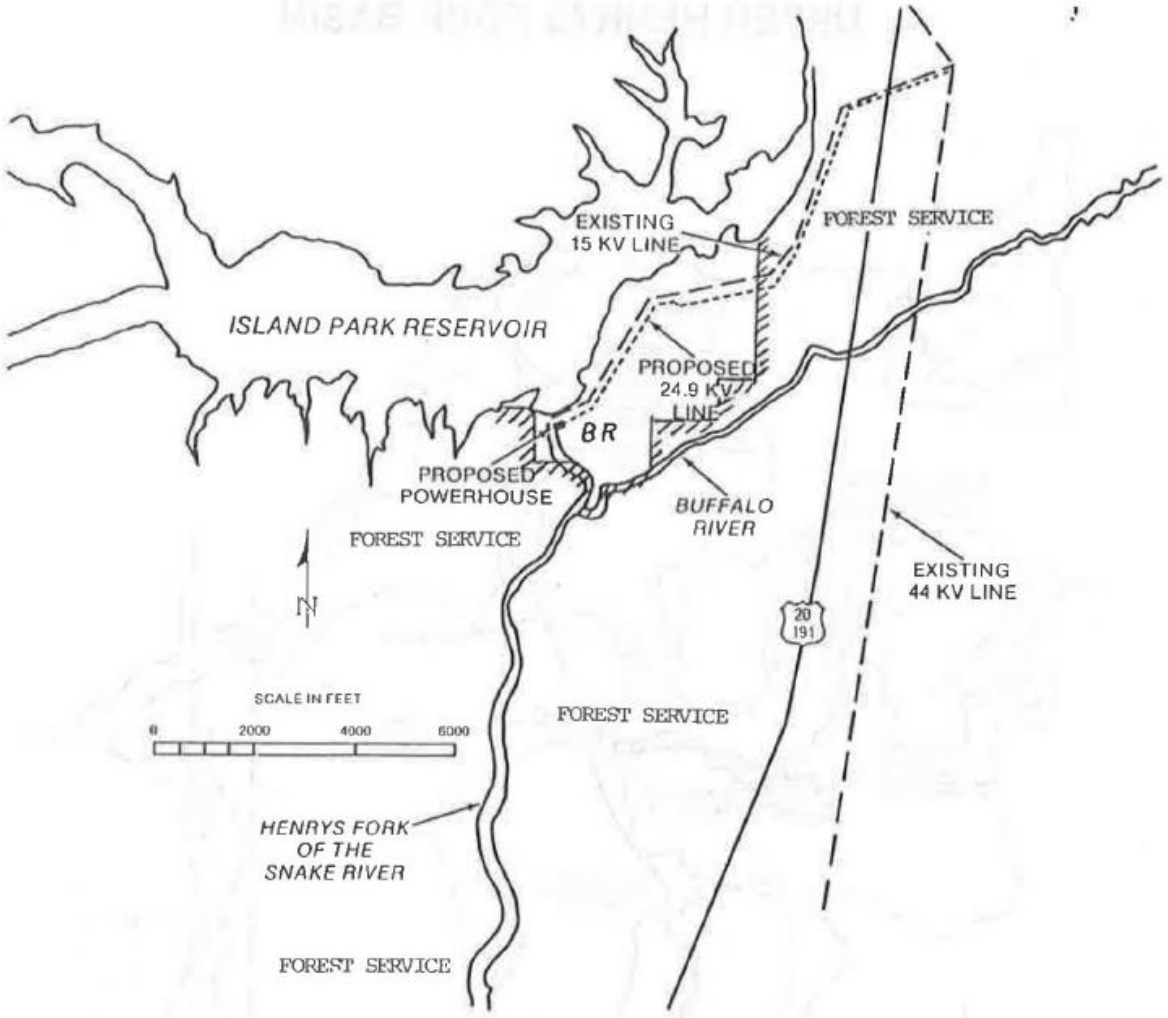


Figure 2. Existing and proposed transmission line routes of the Island Park Dam Project, FERC Project No. 2973, Idaho (source the staff).

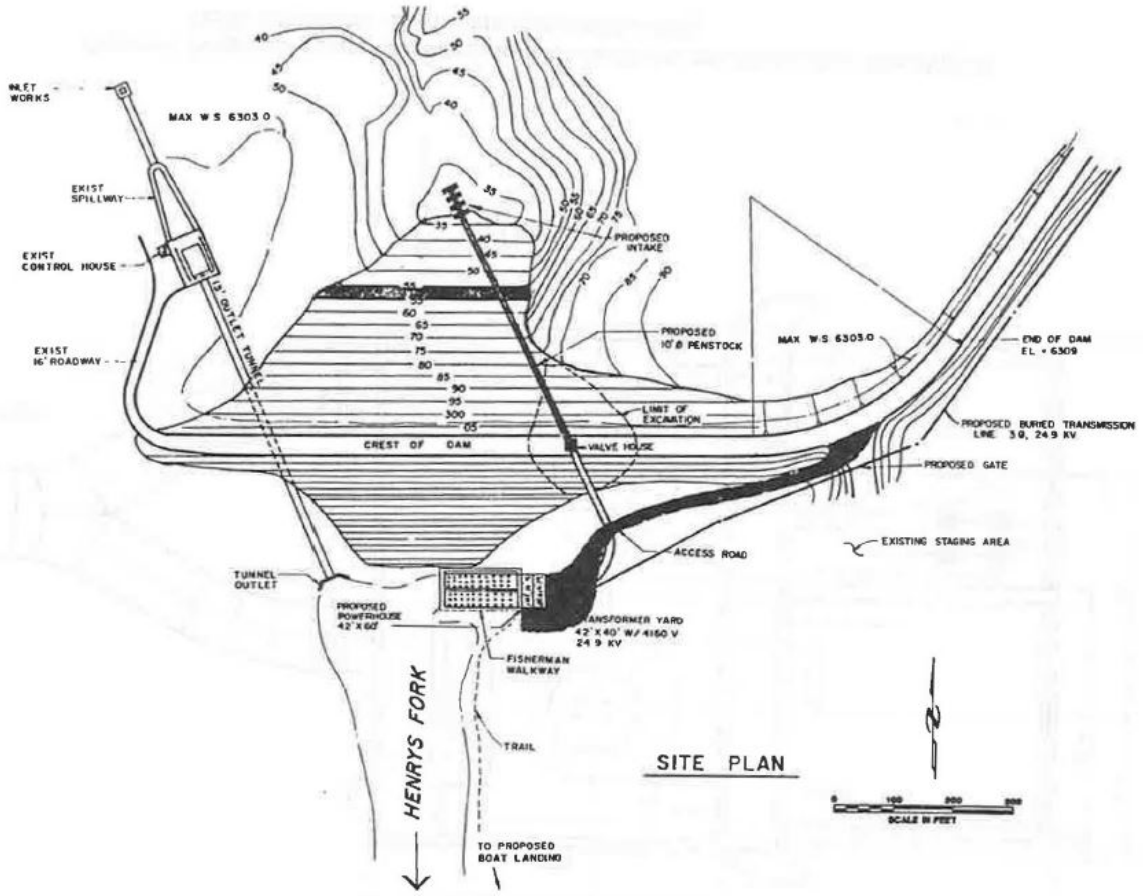
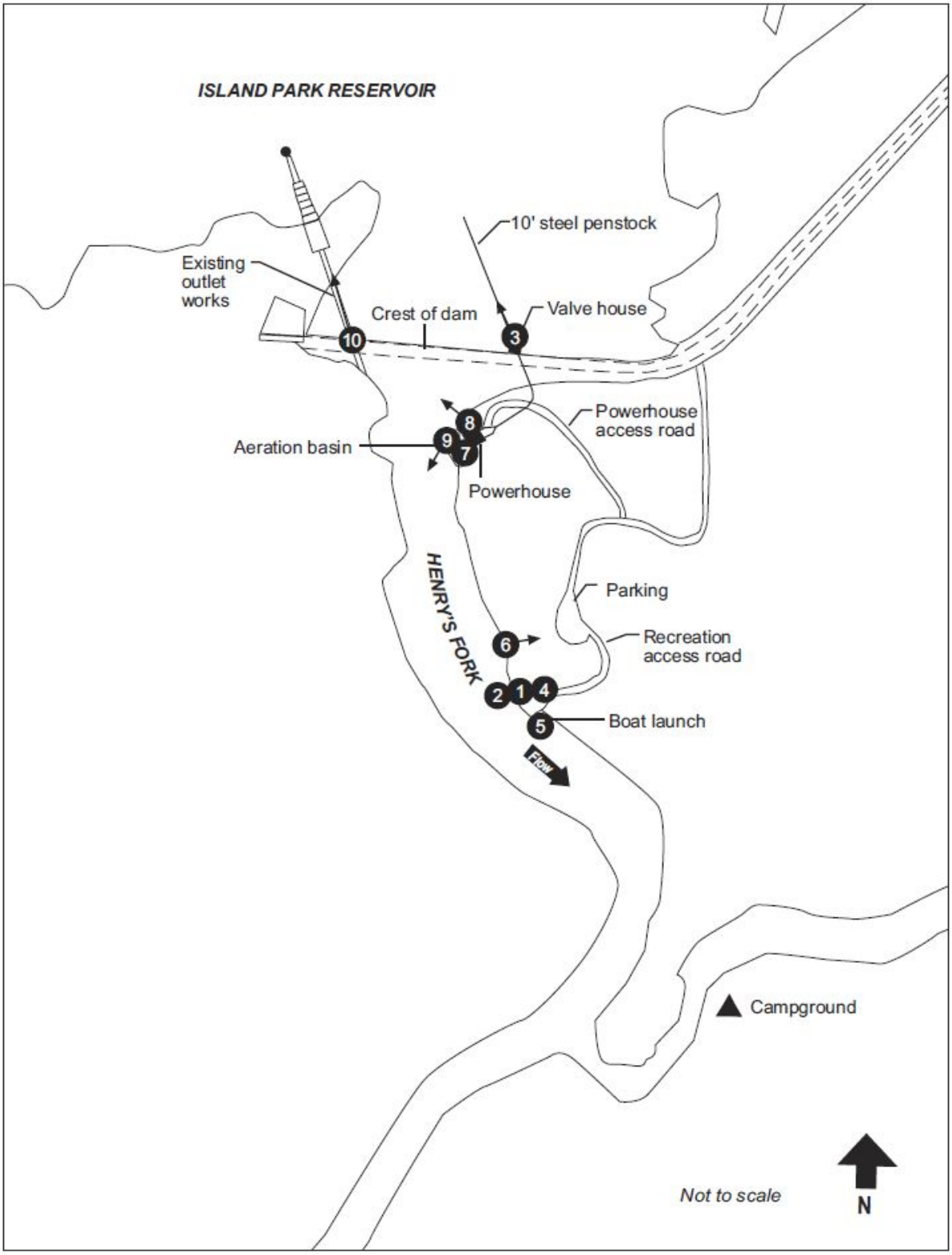


Figure 3. Proposed facilities for the Island Park Dam Project, FERC Project No. 2973, Idaho (source the staff).



P-2973 Island Park

APPENDIX D

FLOWS

Appendix C

Montana-Tennant Analysis

Project
Island Park Hydroelectric Project, located on the Henry's Fork of the Snake River, Idaho.

Question
Is the Island Park Hydroelectric Project in Compliance with a flow release schedule that at minimum meets "good" habitat flow standards calculated using the Montana-Tennant Method?

Project description
The Island Park Hydroelectric Project was constructed on the Island Park Reservoir Dam, located on the Henry's Fork of the Snake River, in July 1994. The Reservoir Dam was constructed in 1939, and is located 0.2 miles upstream from the (small) Buffalo River. The Reservoir is also located about 20 miles downstream from Henry's Lake; the Lake went dry in summer of 1889 according to USGS.

Flow releases from the Island Park Dam have not been below 225 cfs since the construction of the Hydroelectric Project in 1994. Base flows on the Buffalo River are 200 cfs, thus augmenting the release flows from the Dam.

The Montana-Tennant Method is employed below to determine if the Island Park Hydroelectric Project meets "good" habitat flow standards in the reach between the Dam and Buffalo River.

Montana-Tennant Method
- The method based on field observations over a 10-yr period in Montana, Nebraska, and Wyoming, and is generally applicable in northwestern United States;
- The method is based on the annual average flow;
- "Good" at a minimum flows have the following base flow regimens: >20% of the average flow between October and March (dry), and >40% between April and September (wet).

Data review and availability
- Water Year 1999 and 2000 data are available but the USGS states that the data "have not received the Director's approval and as such are provisional and subject to revision."
- Period 1933-2000 average annual flow, below the Reservoir: 631 cfs
- Post-Project (1995-2000) *estimated* annual average flow, below the Reservoir: 846 cfs (this was indeed a wet period regionally)
- Post-Project (1995-2000) monthly average flow, below the Reservoir:
  October-March: monthly means range from 218 to 862 cfs
  April-September: monthly means range from 484 to 1974 cfs

Assumptions
- The 1933-2000 flow conditions in the reach downstream of the Dam (the flow data is available for a period from 1933 to 2000 only) are treated as a baseline to which the channel bed and aquatic habitat had adjusted prior to construction of the Hydroelectric Project.
- It is assumed that the Project has not altered the pre-Project (already Reservoir-regulated) hydrologic regime. Therefore, limited adjustments in river morphology due to the Project are expected.
- Also, it is assumed that the Henry's Fork is morphologically similar to those streams in Montana, Nebraska, and Wyoming for which the Montana-Tennant technique was developed. Wesche and Rechard (1980) questioned the method itself, and instead proposed that the recommended flows are compared with the average 10- and 30-day natural low flows to check whether the required flows are available naturally during low flow periods.

Calculation of recommended in-stream flows, Montana-Tennant method

- Using the period 1933-2000 flow data, calculated recommended base flows *at minimum* are:
  October-March: 126 cfs
  April-September: 252 cfs

Conclusion

- Considering average daily flows for the Oct-Mar and Apr-Sept seasons since WR 1994, the Island Park Hydroelectric Project's flow regime meets meets "Good" habitat flow standards as defined by the Montana-Tennant method, in fact, it meets "Excellent" standards.
- According to the "Island Park Operations Manual" (page 5/21), the flow releases from the Dam have never (i.e. since 1939) been below 170 cfs; the flow releases have not been below 225 cfs since the Project was constructed in 1994. The values above imply instantaneous flow. Just on this basis of the instantaneous flow the Project comes close to the "good" aquatic flow standards at *all* times (rather than some period-average "times").
- Base flows on the Buffalo River, a small tributary to Henry's Fork about 0.2 mi downstream from the Dam, are 200 cfs, thus augmenting the release flows from the Dam and further improving aquatic conditions on Henry's Fork upstream of its confluence with the Fall River.
- It should be noted that that the 1995-2000 period was wet (in comparison to long-term conditions).

In looking at the Island Park Reservoir and its flow release regime, we performed a Montana-Tennant analysis, as suggested. As part of this analysis, we made a critical assumption that since the dam had been built so long ago, the river had scaled itself to accommodate the new flow schedule. (Additionally, flow data is available only since just before the time the dam was built, so there are only 5 years of pre-dam flow records.) Because the Montana-Tennant method relies on average annual flows over the period of record reviewed, the baseline in this case is after the dam was installed. Additionally, the flow regime was not changed after the addition of the hydro project. In this situation, the hydro project inevitably meets the base flow regime, since the flow regime is based on the river with the dam in-place, and the flow regime didn't change after the project was installed.

Because of that we looked at the data that was available for the five years before the dam was built. Unfortunately, that time period coincided with one of the most severe droughts on record.

Consequently, we did a rough calculation of total unimpaired flows that would have come to the point in the river just downstream of the reservoir by adding in known diversions upstream of the reservoir. We were given a rough estimate by the Idaho Department of Water Resources that the diversions on the Henry's Fork between Henry's Lake and the Island Park reservoir total approximately 100cfs. We then added the 100 cfs to the total 631 cfs: Period 1933-2000 *estimated* annual average flow, below the Reservoir.

Using 731 as the estimated annual average flow, we recalculated Montana-Tennant recommended instream flows.

- Using the *estimated* unimpaired flow, calculated recommended base flows *at minimum* are:
  October-March: 146 cfs
  April-September: 292 cfs

Conclusion

Considering monthly mean flows for the Oct-Mar (monthly means range from 218 to 862 cfs) and Apr-Sept seasons (monthly means range from 484 to 1974 cfs) since WY 1994, and a long term average unimpaired flow of 731 cfs, the Island Park Hydroelectric Project's flow regime meets "Good"

habitat flow standards as defined by the Montana-Tennant method, in fact, it meets "Excellent" standards.

Comments on the Data

We reviewed the daily average flows below the Island Park Reservoir between 1994 and 2000 in order to determine if there were any instances of the flows going below the recommended "Good" values . For the 7 years of data, there were 21 days total that the USGS records indicate that the flows fell below 292 cfs in the April through September months:

- In 2000, the flows were 270 on April 4.
- In 1995, the flows ranged from 275 to 292 cfs between April 1 and April 11.
- In 1994, the flows ranged from 222 to 290 cfs between April 1 and April 6; and ranged from 235 to 283 cfs between April 12 and 14.

For several reasons, we feel these instances of flows below 292 cfs are not significant deviations:

1) The flows we used to determine Montana-Tennant recommended flows are based on *estimated* unimpaired flows, rather than actual gaged unimpaired flow records.
2) For water years 1994 and 1995, the USGS data records for the "estimated daily discharges" are considered to be of "fair" quality, rather than "good". "Fair" means that the accuracy is within 15%. "Good" is within 10%. In other words, the data are not perfectly accurate. In the year 2000, the data are provisional.
3) The days when the flows fell below 292 cfs are in all cases within the first 14 days of the first month that the recommended flows increased from 146 to 292 cfs. In most cases the flows under 292 were within the first 5-10 days of the month. In all cases the flows were significantly above 146 cfs.

Given the *estimated* unimpaired flows and the fact that the USGS data quality is only considered to be fair, we feel that the difference in 1995 between 275 and 292 cfs is not significant. Although the some of the flows in 1994 are 24% lower than the Montana-Tennant recommended flow (222 cfs measured versus 292 cfs recommended) this represents only 5 days out of a total of 7 years.

We feel that due to the quality and estimated nature of so much of this data, and the timing of those particular flows, these 21 days of flows are insignificant in determining the overall compliance of the project with recommended Montana-Tennant flows.

From: Troy.Saffle@deq.idaho.gov
To: Katie Sellers
Subject: RE: Review of Island Park Hydro Data for Low Impact Hydropower Institute
Date: Thursday, December 22, 2016 5:00:01 PM
Attachments: image002.png

Katie, please allow this email to serve as DEQ's response to your inquiry below.

DEQ reviewed the Montana-Tennant Method and also shared this information with local stakeholder groups. It appears the method is not an accurate estimation of flows. Regardless, it appears the actual hydropower use of the Island Park Dam does not, by generating electricity, impact streamflow. The manipulations of flows are at the request of irrigation or other use demands through the US Bureau of Reclamation. As summarized by Rob VanKirk, at the Henry's Fork Foundation, "The Island Park Hydroelectric plant is operated as a "run-of-river" facility. Although power-plant constraints are considered in DMP [Drought Management Plan] decisions, the plant has little influence on streamflow, which is determined primarily by irrigation storage and delivery needs, with attention given to winter-flow needs for the fishery and to power-plant constraints and capacity, when possible". DEQ concurs with VanKirk's findings.

Please do not hesitate to contact me with any questions or concerns about this project or DEQ's position. Thanks.

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: Friday, November 18, 2016 11:29 AM
To: Troy Saffle
Cc: Laura Cowan
Subject: Review of Island Park Hydro Data for Low Impact Hydropower Institute

Hi Troy,
Kleinschmidt is helping Fall River Rural Electric Cooperative with applying for a Low Impact Hydropower Institute (LIHI) Certification for the Island Park Hydroelectric Project (FERC No. 2973). Since the Island Park Project does not have any prescribed flow conditions, as part of the LIHI application, Fall River was required to provide LIHI with proof of "good" habitat flow standards as calculated using the Montana-Tennant method. Upon initial review of the Island Park LIHI application, LIHI has requested that we ask the Department of Environmental Quality to confirm that proper application of the Montana-Tennant method analysis was provided for this project.

The attached Montana-Tennant method analysis was conducted in 2000 as part of the Project's original LIHI certification application proceedings. The analysis determined that flows released from the Project met "good" habitat standards overall and "excellent" habitat standards in the area between the Island Park Dam and the Buffalo River.

When you have the availability, could you please take a moment to review the attached analysis to confirm that proper application of the Montana-Tennant method was applied?

Thank you,
Katie

Katie Sellers
Regulatory Coordinator
Kleinschmidt
Office: 207-416-1218
www.KleinschmidtGroup.com

APPENDIX E

WATER QUALITY

BINGHAM ENGINEERING

100 Lindbergh Plaza 2, 5160 Wiley Post Way Salt Lake City Utah 84116 801-532-2520

February 18, 1986

Mr. Kenneth Plumb, Secretary
FERC
825 North Capitol Street N.E.
Washington, D.C. 20426

RE: Island Park Hydroelectric Project - FERC No. 2973-004

Dear Mr. Plumb:

Enclosed please find the original and 14 copies of the Water Quality Certificate for the Island Park Hydroelectric Project. Would you please add this to our files.

Sincerely,

BINGHAM ENGINEERING

Clark M. Mower
Vice President

CMM/rr
667-011

cc: MacNeill Watkins
George Smith
Brett Van Wagoner
Robert Wood
Bruce Morley

Enclosure

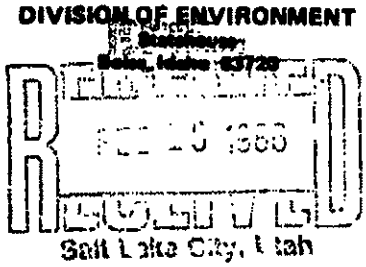
8603030104

FILED - DOCKETED

STATE OF IDAHO

DEPARTMENT OF HEALTH AND WELFARE

DIVISION OF ENVIRONMENT
Statehouse
Boise, Idaho 83720



February 7, 1986

Mr. Calvin Wickham
Fall River Rural Electric Cooperative, Inc.
714 Main Street
Ashton, Idaho 83420

REFERENCE TO: FERC #2973-004, Island Park Hydro Project,
Henry's Fork Snake River, Fremont County, Idaho

Dear Mr. Wickham:

We have reviewed the "Exhibit E" portion of the Federal Energy Regulatory Commission application for license for the Island Park Hydroelectric Project in Fremont County, Idaho. The Division of Environment finds that since the proposed project would utilize existing releases from the Island Park Dam, it is anticipated that construction with suitable mitigation practices would not have unacceptable impacts to water quality.

From this determination, we certify under Section 401 that this construction will comply with applicable requirements of Sections 301, 302, 303, 306 and 307 of PL 92-500 and will not violate Idaho Water Quality Standards and Wastewater Treatment Requirements.

This certification does not imply approval of the activity by other agencies of the State of Idaho.

Sincerely,

Lee W. Stokes, Ph.D.
Administrator

LWS:lab

cc: Fred Springer, FERC
Al Murrey/Larry Koenig, IDHW
Gordon Hopson/George Spinner, IDHW
Nickie Arnold, EPA
Clark Mower, Bingham Engineering

APPENDIX F

FISH PASSAGE

UNITED STATES OF AMERICA 60 FERC ¶ 62,227
FEDERAL ENERGY REGULATORY COMMISSION

Fall River Rural Electric Cooperative, Inc. — Project No. 2973-031 Idaho

ORDER APPROVING AND MODIFYING FUNCTIONAL DESIGN DRAWINGS FOR AN INTAKE STRUCTURE AND FISH SCREENS
(Issued September 23, 1992)

On August 19, 1992, the Fall River Rural Electric Cooperative, Inc. (licensee) filed functional design drawings of an intake structure and fish screens for the Island Park Hydroelectric Project pursuant to license article 128. Article 128 requires the licensee, after consulting with the Idaho Department of Fish and Game (IDFG) and the U.S. Fish and Wildlife Service (FWS), to file with the Commission, for approval, functional design drawings of the intake structure and fish screens along with agency comments.

Licensee's Submission

The functional design drawings for the intake structure and fish screens, enclosed in a letter dated July 13, 1992, to the FWS and the IDFG, indicated that the fish screens will be wedge wire, positioned above the steel pipe siphon intake structure. The wedge wire screens will have 3/8-inch openings with a flow approach velocity of approximately one foot per second. Cleaning blades will move along the wedge wire screens to remove debris.

Agency Comments

By letter dated July 23, 1992, the FWS stated that they had reviewed the functional design drawings for the intake structure and fish screens and indicated no objection to the design drawings. Similarly, the IDFG, by letter dated September 21, 1992, stated that they had no objection to the design as proposed. Both agencies recommended, however, that the licensee establish a written operating protocol for the intake structure, fish screens, and associated cleaning blade and brush arrangement.

Discussion

During the licensing process for the Island Park Project, the Commission staff prepared an environmental assessment (EA) that identified and addressed potential environmental impacts and issues that would be associated with the construction and

♀

operation of the project. 1/ The Island Park Reservoir, upper Henry's Fork, and the lower Henry's Fork, downstream from the project dam, contain reproducing salmonid populations; additionally, the Island Park Reservoir is stocked with kokanee salmon (Oncorhynchus nerka kennerlyi) and coho salmon (O. kisutch). The Lower Henry's Fork is considered a world class blue ribbon wild trout stream. The Lower Henry's Fork fishery has an annual estimated net value of $2.86 million. 2/

During licensing discussions, resource agencies stated that the project would entrain fish through the siphon intake. Consequently, the intake structure was redesigned with its location on the bottom of the reservoir. Studies of Fall River's temperature and dissolved oxygen (DO) sampling from 1985 to 1987 determined that the Island Park Reservoir is chemically and thermally stratified. 3/ The low level intake would draw water low in DO ranging from 2.1 to 6.9 milligrams per liter (mg/l), while the upper reservoir DO levels range from 4.8 to 12.5 mg/l. 3/ Because the DO levels are lower on the bottom of the reservoir, salmonids are less likely to occupy the intake area. In addition, the 3/8-inch wedge wire screening and the slow approach velocities would adequately protect the fishery.

The functional design drawings of the project intake and fish screens will protect fishery resources from entrainment. The 3/8-inch wedge wire screen and slow approach velocity of one foot per second meet the requirements outlined in the Commission's EA and will restrict salmonids from entering the intake structure. Therefore, the functional design drawings filed for the intake structure and fish screens should be approved.

1/ Environmental Assessment, Island Park Hydroelectric Project, Project No. 2973-004, Idaho, Federal Energy Regulatory Commission, Office of Hydropower Licensing, Division of Project Review, issued September 29, 1988. This document is available in the Commission's public files associated with this proceeding.

2/ Angradi T. and C. Contor. 1988. Henry's Fork fisheries investigations, draft final report for 1987. Cooperative Project, Idaho Department of Fish and Game. 53 pp.

3/ Ecosystems Research Institute. 1988. Island Park Hydroelectric Project (FERC Project No. 2973) environmental assessment. Prepared for the Fall River Rural Electric Cooperative and the U.S. Forest Service, Targhee National Forest. 364 pp.

♀

In order to ensure proper operation of the intake structure, fish screens, and fish screen cleaning apparatus, the licensee should file, for Commission approval, a protocol for the operation and maintenance of these structures. The protocol should include operation under varying reservoir levels and seasonal conditions, describe the cleaning frequency of the fish screens and how the frequency will be determined, and describe how the protocol, after project operation, will be reviewed and modified for optimal effectiveness. The licensee should, after providing the FWS and the IDFG 30 days to review and comment on the protocol, address the resource agencies' comments on the protocol. The licensee should file the protocol, with the Commission, within 90 days of the date of this order; the filing should include the comments from the resource agencies.

The Director orders:

(A) The functional design drawings for the intake structure and fish screens, filed on August 19, 1992, and enclosed in a letter dated July 13, 1992, to the U.S. Fish and Wildlife Service (FWS) and the Idaho Department of Fish and Game (IDFG), as modified by paragraph B, are approved.

(B) The licensee shall, within 90 days from the date of this order, file for Commission approval, an operation protocol for the intake structure, fish screens, and fish screen cleaning apparatus, along with comments from the FWS and the IDFG. The protocol shall include operation under different reservoir levels and seasonal conditions, describe the cleaning frequency of the fish screens and how the frequency will be determined, and describe how the protocol, after project operation, will be reviewed and modified for optimal effectiveness. The licensee shall allow the agencies 30 days to comment on the protocol and shall include the agencies' comments in the filing made with the Commission.

(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.

J. Mark Robinson
Director, Division of Project
Compliance and Administration

♀

930125-0220

930125-0220

BINGHAM ENGINEERING 5160 Wiley Post Way, Salt Lake City, Utah 84116 801 532-2520 801 328-2881 FAX

January 12, 1992

Ms. Lois Cashell
Secretary
Federal Energy Regulatory Commission
825 North Capitol Street, N.E.
Mail Code: DPCA HL-21
Washington, DC 20426

Re: Island Park Hydroelectric Project, FERC project #2973

Dear Ms. Cashell,

On behalf of Fall River Rural Electric Cooperative, Inc., and in compliance to Article 128 of the License, and the Order Approving And Modifying Functional Design Drawings For An Intake Structure And Fish Screens issued September 23, 1992, please find enclosed for your approval a copy of the Scenario for Operation of the Fish Screen Cleaner.

A copy of the above listed scenario has been forwarded to the U.S. Fish and Wildlife Service and the Idaho Fish and Game for comment. All agency comments will be forwarded to you as soon as they are received.

If you have any questions feel free to contact me at (208) 558-9270.

Sincerely,

BINGHAM ENGINEERING

Brent L. Smith

Brent L. Smith
Project Coordinator

cc: Mr. Dee Reynolds, Fall River Electric
Mr. Arthur C. Martin, FERC Portland

9301250220

ISLAND PARK HYDROELECTRIC PROJECT

Scenario for Operation of the Fish Screen Cleaner

Description of Fish Screen and Cleaner

The FERC License requires an approach velocity no greater than one-foot per second and a screen opening no greater than 3/8 of an inch.

Inasmuch aa the maximum discharge will be 960 cubic feet per second the screen area required to meet the velocity requirement is 960 square-feet. The 10-foot diameter penstock was fabricated in 0.625-inch thick steel in 60.5 foot lengths.

The screen was mounted on a single 60.5 foot section of the penstock. Flat sections of screen were designed to be mounted on top of the penstock in an inverted "V" configuration. The screens were made of stainless steel wedge wire running parallel to the axis of the pipe.

To assure a uniform velocity of water through the screens, a model study was made of the opening to be cut in the top of the penstock. Dr J Paul Tullis of the Utah State Water Research Laboratory found that the opening in top of the penstock should be larger at the upstream end. The width of the opening tapers from eight feet at the upstream end to one foot at the downstream end.

The screens fabricated from stainless steel were made in 14 panels each 100.5-inches high and 100.5-inches long. The screens are supported by an angle iron frame and have internal bracing designed to withstand an external unbalanced pressure of ten-feet of water in case of partial blockage of the screens.

Cleaning Device

A moveable screen cleaner was designed to travel on a wide flange beam mounted on the top of the screen supporting frame. The travelling section supports a teflon cleaning blade and a stainless steel brush that bears against the external surface of the screens on both sides of the inverted "V". The travelling device will, be moved by means of a cable and pulley system. The "home" position at the upper end of the 59-foot long screen section to the lower end and return. The 3/16-inch stainless steel cable has a tensile strength of 2800 pounds.

Operation

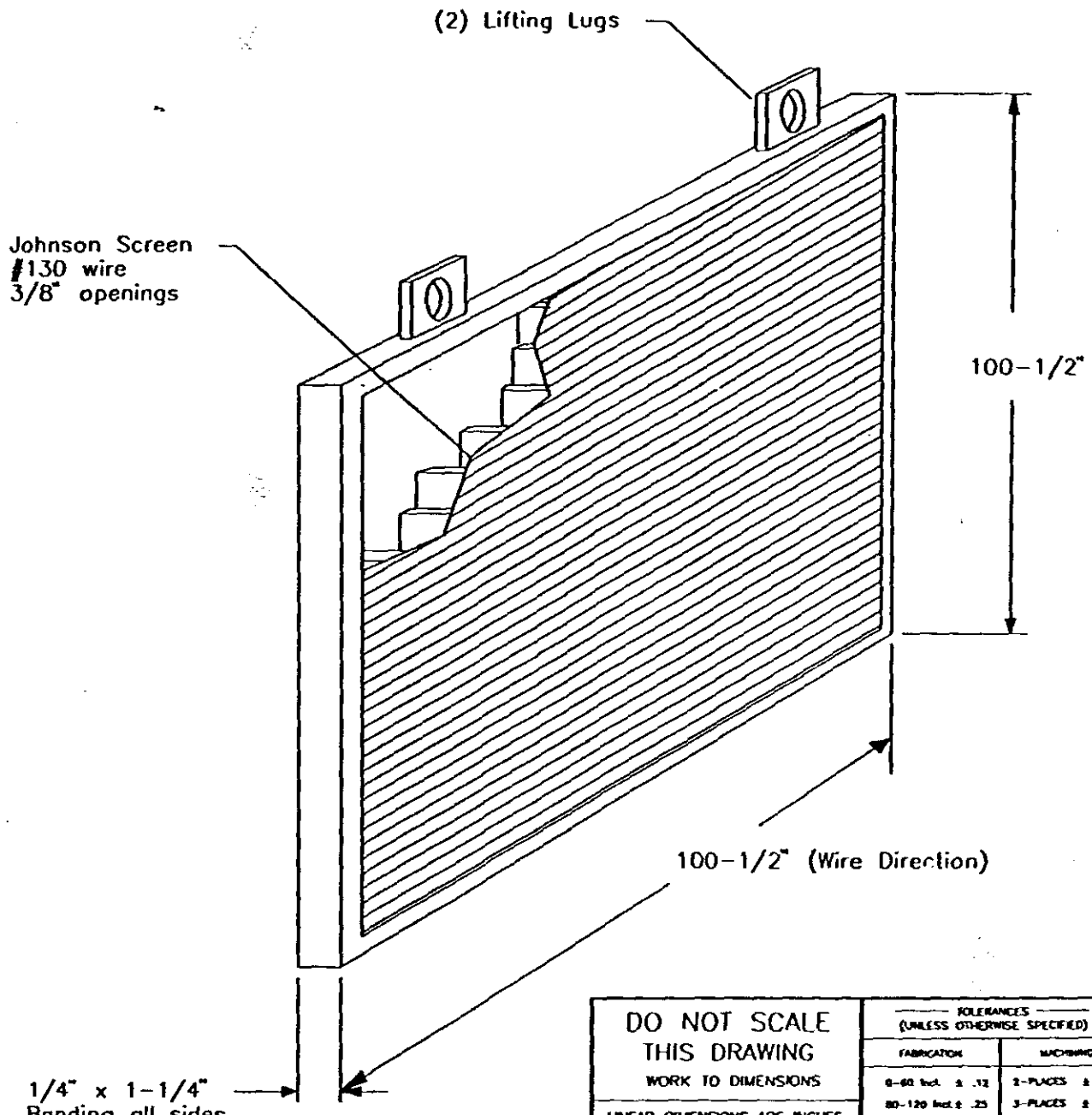
A manually operated winch will by means of the 3/16-cable will move device up and down the 59-foot long screen. The winch drum will be 8-inches in diameter. The winch will be turned by hand crank handles. The cables from the cleaner trolley will follow the penstock alignment and enter the valve house at the intermediate level where they will be attached to the winch drum.

A pressure sensing device will measure the static head at the exterior of the intake screen and the water pressure on the inside of the screen. A differential in the pressure readings will indicate clogging of the screen openings. This condition will activate warning buzzers and flashing lights in both the valvehouse and the powerhouse to alert the operator.

It is anticipated that debris that will clog the screen will mainly be confined to the late summer and fall and likely will be moss and leaves. The Fall River Rural Electric Association operators of the powerplant, plan to have a diver available to make periodic inspection of the condition of the screens and check the functioning of the screen cleaner.

Should conditions require it will be possible to close the 120-inch valve in the Valvehouse and open an air inlet valve to backflush the screens.

Should the stoppage of flow in the penstock occur because of an emergency shutdown of the turbine-generator units or the clogging of the screens, the existing gates in the outlet works of the Gatehouse will automatically be activated to discharge water into the stream below the dam.



Material: 304 stainless steel
Est. net wt. 400 per panel
Qty. required 14
Design: 10 ft. water differential
Supports required on 24" centers by contractor running horizontal.
Contractor to add anchors to back side of panels.

DO NOT SCALE THIS DRAWING
WORK TO DIMENSIONS

LINEAR DIMENSIONS ARE INCHES

THIRD ANGLE PROJECTION

TOLERANCES (UNLESS OTHERWISE SPECIFIED)

FABRICATION	MACHINING
0-60 Incl. ± .12	2-PLACES ± .03
60-120 Incl. ± .25	3-PLACES ± .015
OVER 120 ± .50	
ANGLES ± .5°	

125 MAXIMUM ROUGHNESS HEIGHT ON MACHINED SURFACES

Fall River Rural Electric Coop., Inc.
Siphon Intake

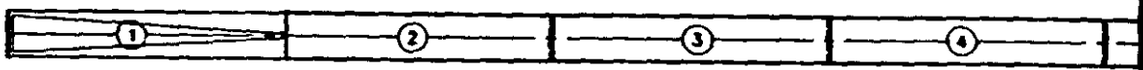
Johnson Filtration Systems Inc.
P.O. Box 64118
St. Paul, Minnesota 55164-0118

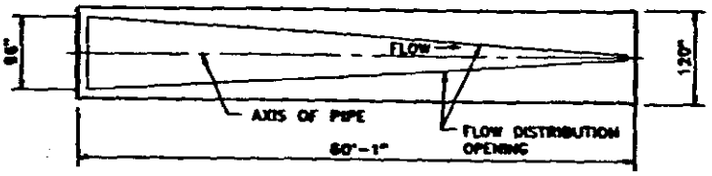
Bingham Engineering

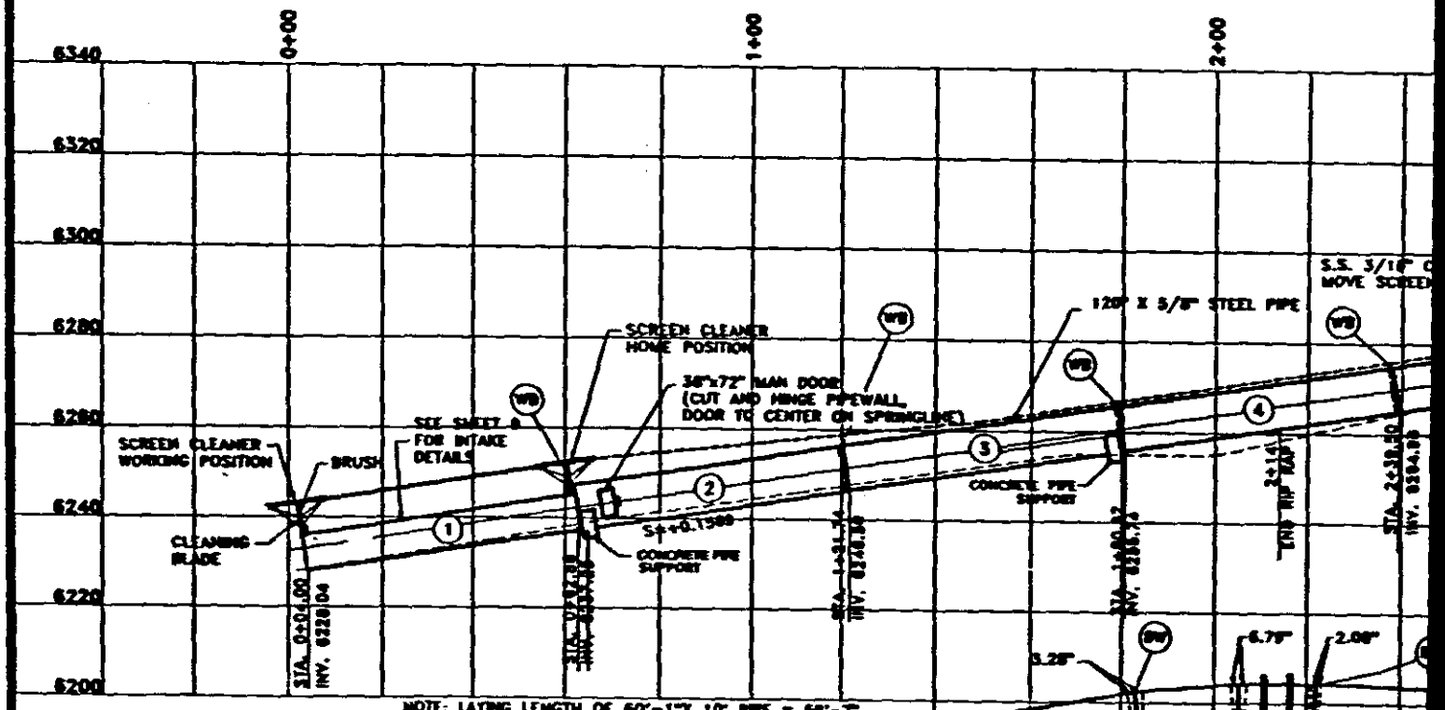
Proj# 1585-007

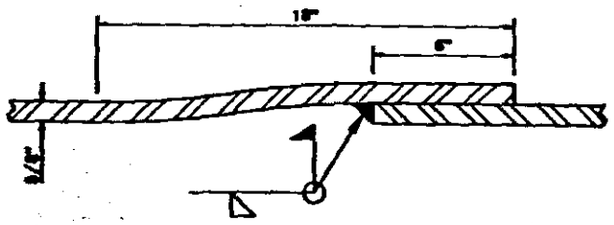
SHEET ____ OF ____

1169 0000

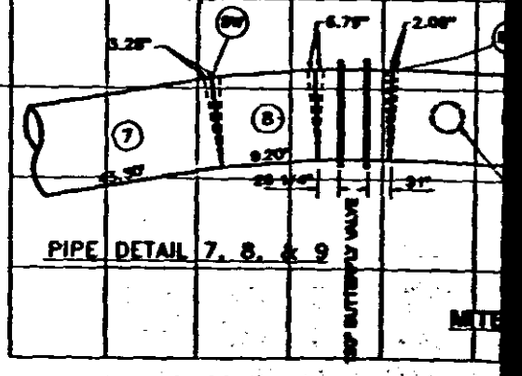




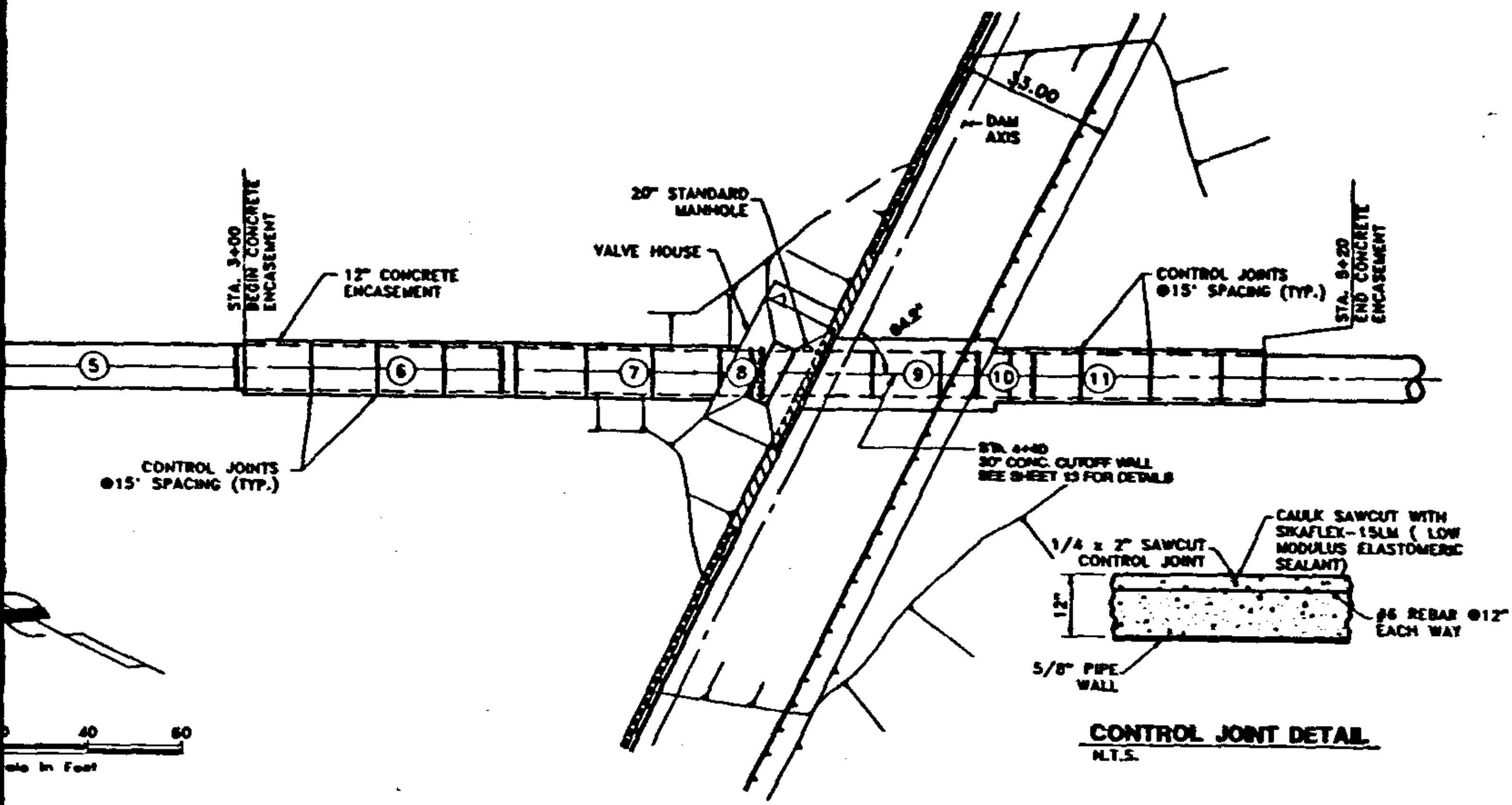




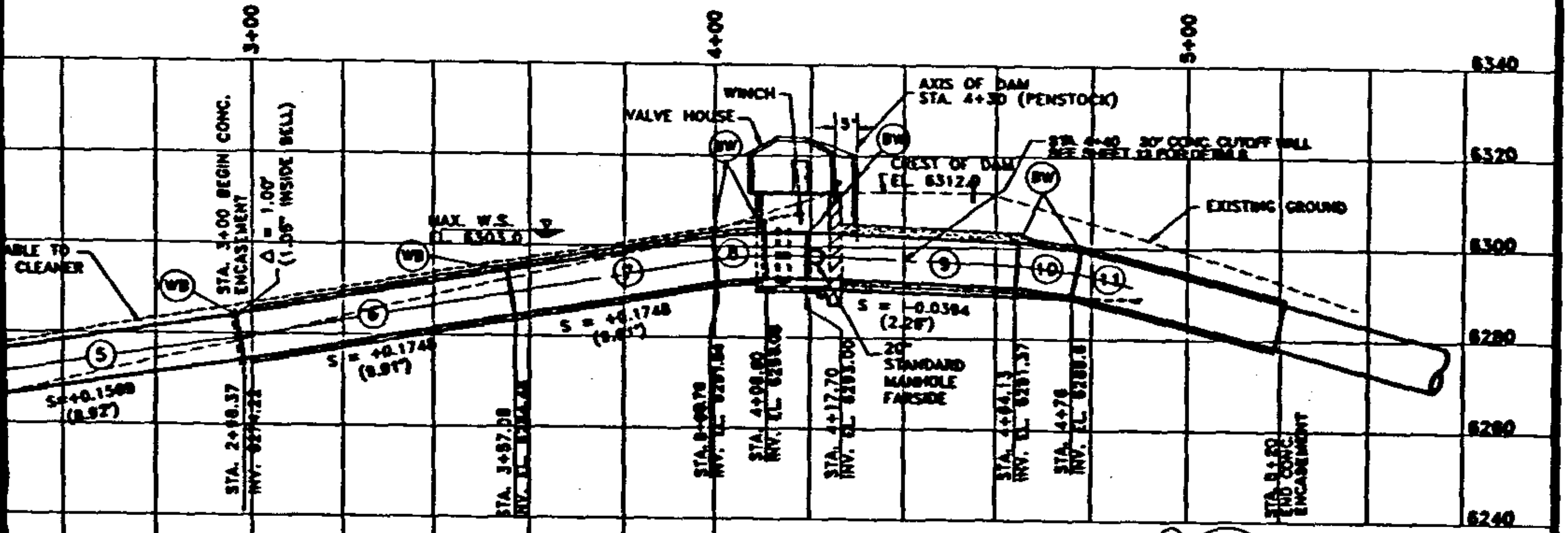
WELD BELL JOINT DETAIL (WB)
N.T.S.

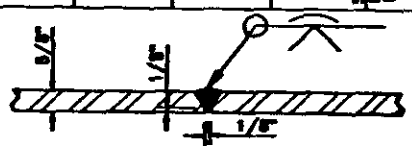


PIPE DETAIL 7, 8, & 9

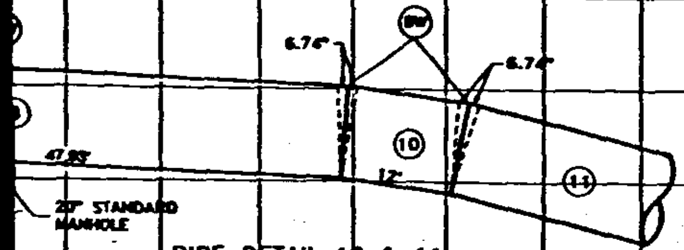


CONTROL JOINT DETAIL
N.T.S.





BUTT WELD DETAIL (BW)
N.T.S.



PIPE DETAIL 10 & 11

DETAIL

FALL RIVER RURAL ELECTRIC COOPERATIVE, INC.

ISLAND PARK HYDROELECTRIC PROJECT

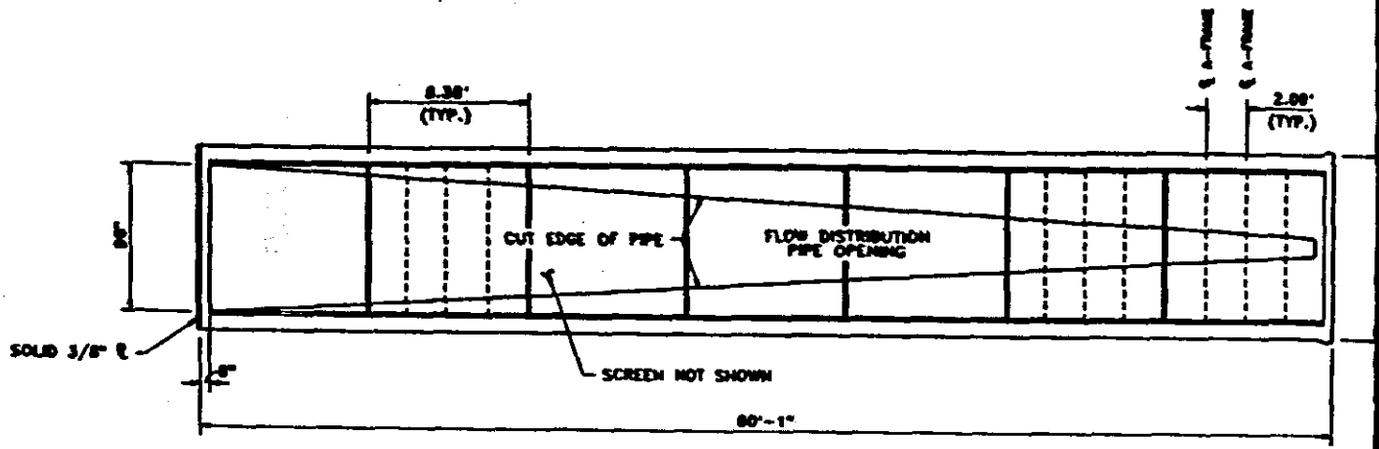
PIPE FABRICATION DETAILS
STA. 0+04 TO STA. 4+30

BINGHAM ENGINEERING
SALT LAKE CITY

Date AUG. 1992 | Proj # 1505-008 | Sht 7 of 35

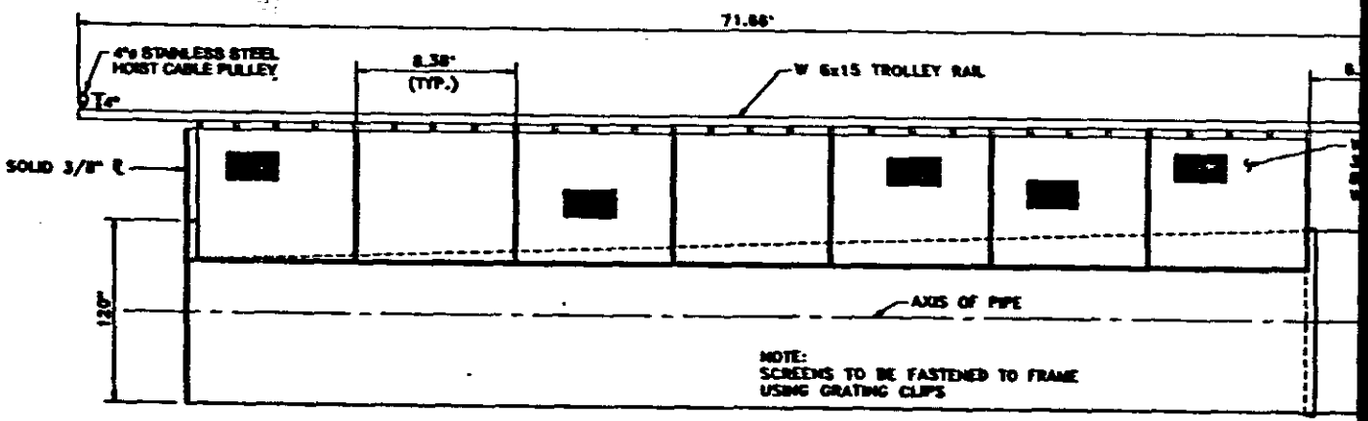
Rev.	By	Date	Remarks
2	JRB	10/3/92	REVISE CONCRETE ENCASEMENT LENGTH
1	JRB	8/23/92	DELETE EXPANSION JOINT

1171 0000



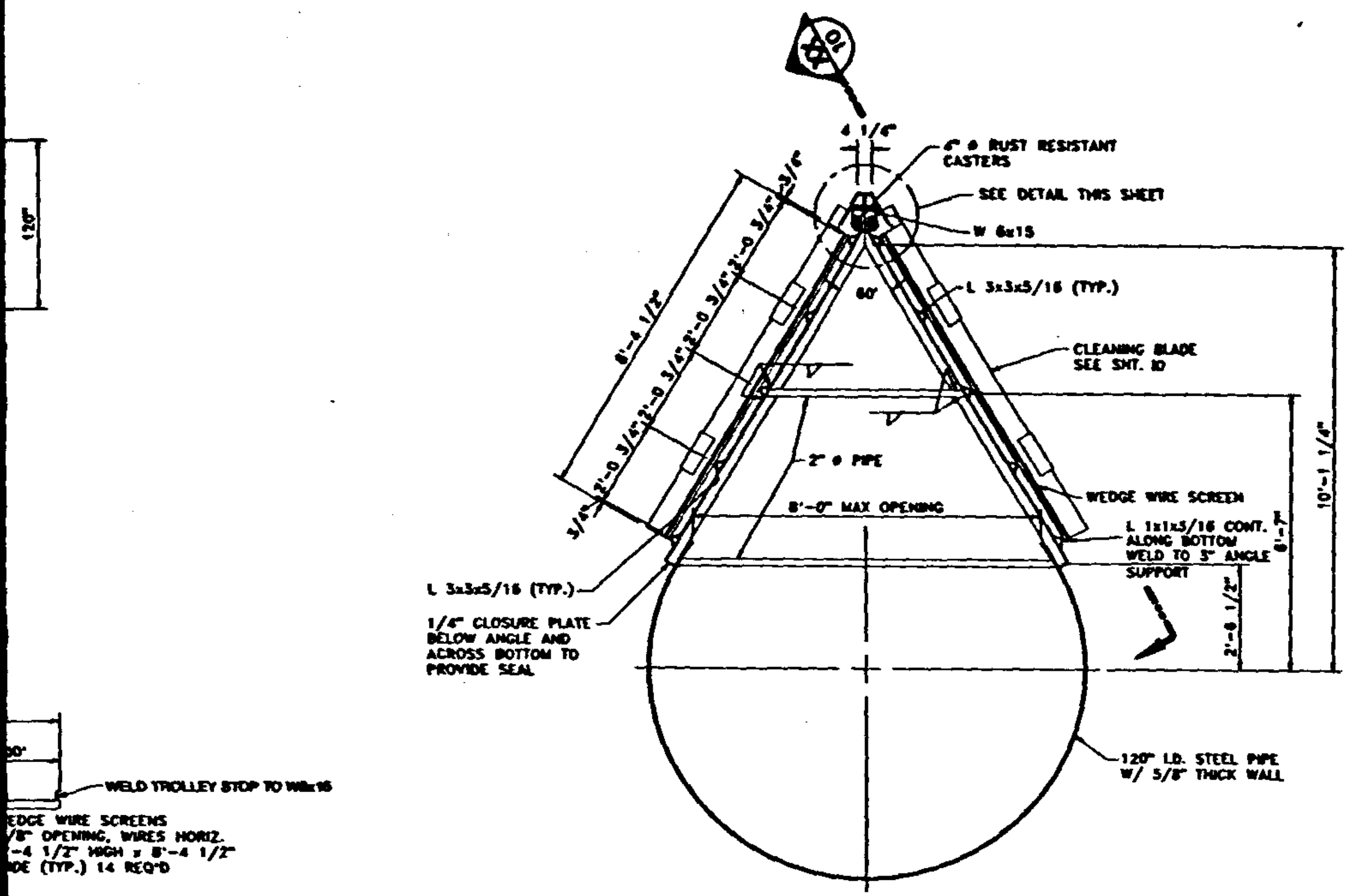
PLAN

0 5 10
Scale In Feet



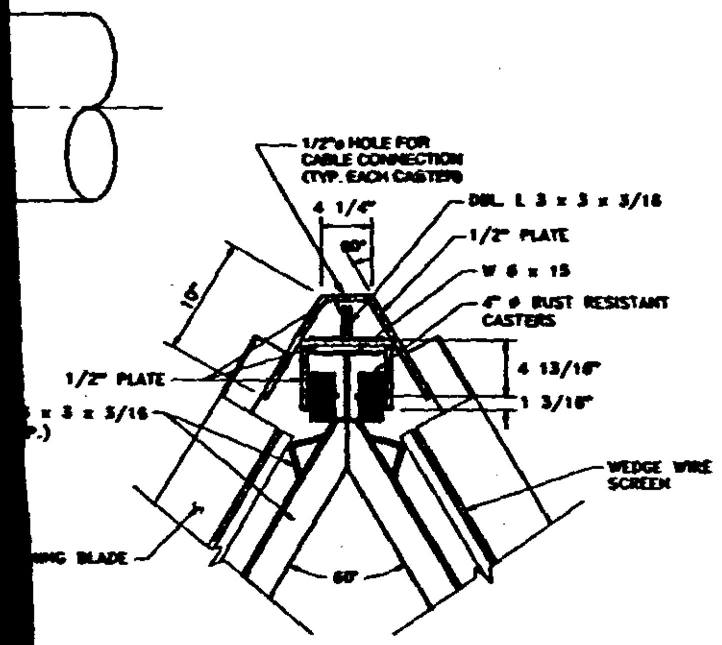
ELEVATION

0 5 10
Scale In Feet



WEDGE WIRE SCREEN DETAIL

Scale in Feet (0, 2, 4)



CASTER DETAIL

Scale in Feet (0, 1, 2, 3)

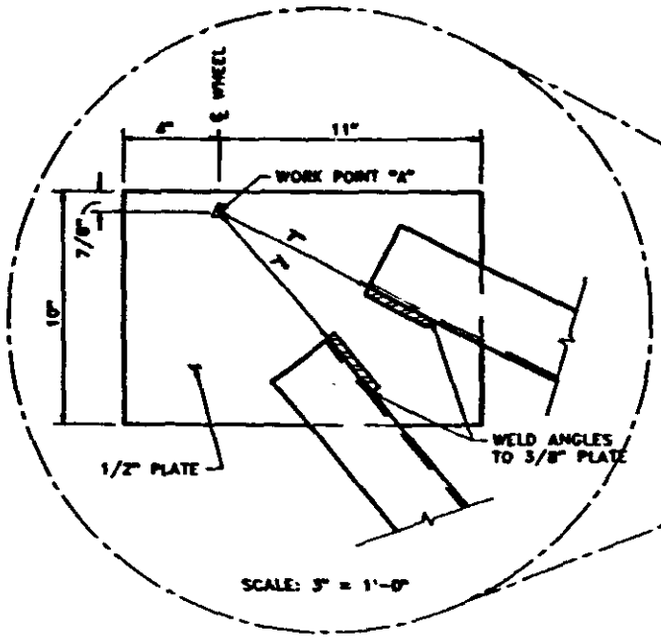
FALL RIVER RURAL ELECTRIC COOPERATIVE INC.

ISLAND PARK HYDROELECTRIC PROJECT

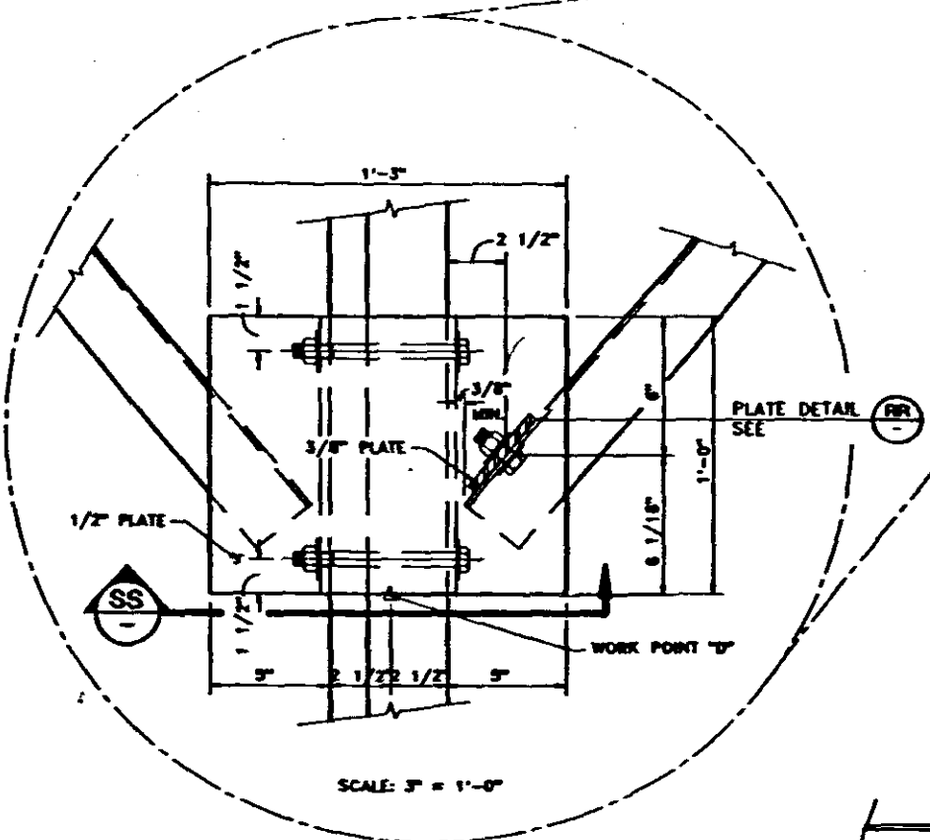
SIPHON INTAKE & SCREEN

BINGHAM ENGINEERING
SALT LAKE CITY – (801) 532-2520

Date AUG. 1992 | Proj # 1585-007



SCALE: 3" = 1'-0"



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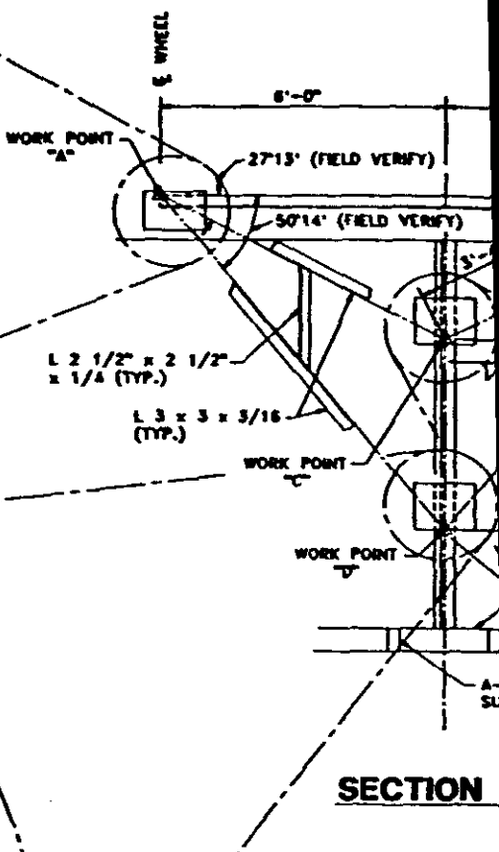
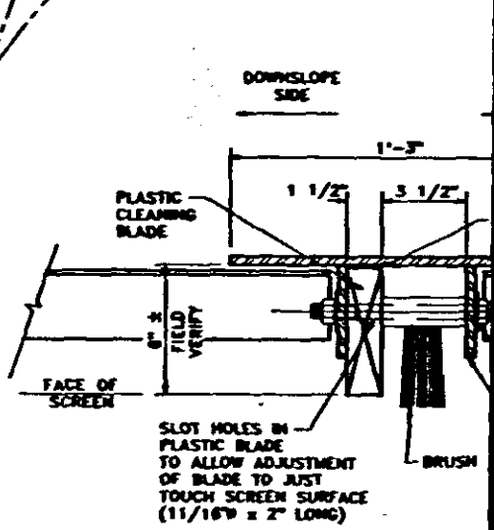


SECTION

Scale in Feet



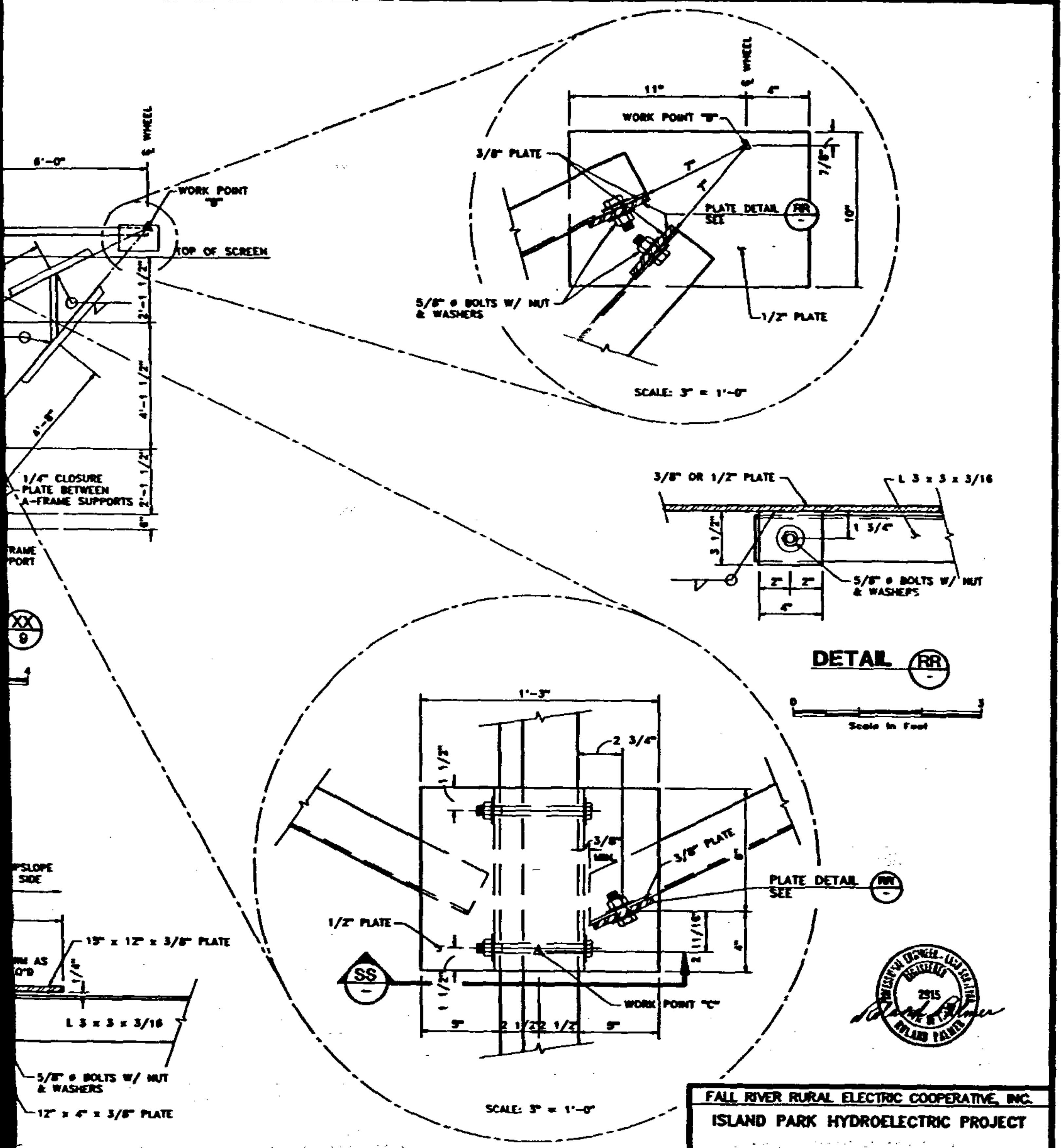
SECTION

Scale in Feet

VERIFY SCALES

BAR IS ONE INCH ON ORIGINAL DRAWING

IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY



FALL RIVER RURAL ELECTRIC COOPERATIVE, INC.

ISLAND PARK HYDROELECTRIC PROJECT

INTAKE SCREEN CLEANING BLADE DETAILS

BINGHAM ENGINEERING
SALT LAKE CITY – (801) 532-2520

Design: PJT
Drawn: DD SCHNOETS

Date AUG. 1992 | Proj # 1585-005 | Sht 10 of 36

Rev.	By	Date	Remarks

1175 0000

Island Park Hydroelectric Project (FERC No. 2973)

Low Impact Hydroelectric Power Facility Certification

1. Contact Information for person completing the questionnaire:

Name & Title: GARY VECCHIO NATURAL RESOURCE PLAN COORD
Organization: **Idaho Department of Fish and Game**
Address:

Phone: 208 525 7290
Email: GARY.VECCHIO@IDFG.IDAHO.GOV

2. To the best of your knowledge, is the Island Park Hydroelectric Project (FERC License No. 2973) 1997 Amended License Article 403 *Ramping Rate Monitoring Plan* still valid?

☒ Yes ☐ No

☐ N/A or Unknown. If N/A or Unknown please explain:

2(a) Is the Island Park Hydroelectric Project (FERC Project No. 2973) currently in compliance with the 1997 Amended License Article 403 *Ramping Rate Monitoring Plan*?

☐ Yes ☐ No

☒ N/A or Unknown. If N/A or Unknown please explain: (HISTORICALLY) RAMPING RATE REPORTS SEE OFTEN HAVE FISH OUTSIDE RATES REQUIRED.

3. To the best of your knowledge, are Island Park Hydroelectric Project (FERC License No. 2973) operations in compliance with flow standards?

☒ Yes ☐ No

☐ N/A or Unknown. If N/A or Unknown please explain:

OUTSIDE OF #2a ARTICLE

4. To the best of your knowledge, is the Island Park Hydroelectric Project (FERC License No. 2973) 1992 Amended License Article 128 *Fish Screen* still valid?

☐ Yes ☐ No

☒ N/A or Unknown. If N/A or Unknown please explain:

4(a) Is the Island Park Hydroelectric Project (FERC Project No. 2973) currently in compliance with the 1992 Amended License Article 128 *Fish Screen*?

☐ Yes ☐ No

☒ N/A or Unknown. If N/A or Unknown please explain:

5. To the best of your knowledge, do Island Park Hydroelectric Project (FERC License No. 2973) 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:

If you have any additional comments, please provide them here: I STRONGLY SUSPECT ALL FISH SCREEN ARTICLES ARE IN COMPLIANCE, I JUST DONT HAVE FIRST-HAND KNOWLEDGE

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; Vecellio,Gary
Subject: FERC No. 2973 LIHI Certification - Request for IDFG Feedback
Date: Thursday, September 17, 2015 12:40:52 PM
Attachments: ISL T RACKS.pdf

Dear Katie:

Back in 2010 our regional fisheries staff coordinated with BOR concerning the fish screen as related to requirements of Article 128.

As best we can tell the Island Park Hydroelectric project (P-2973) is adhering to the fish screen requirements.

Thanks,

Tom Bassista
Environmental Staff Biologist

Idaho Department of Fish and Game
Upper Snake and Salmon Regions
4279 Commerce Circle
Idaho Falls, ID 83401
208.525.7290

From: Garren,Dan [mailto:dan.garren@idfg.idaho.gov]
Sent: Monday, August 23, 2010 4:56 PM
To: Beus, Michael W.
Subject: RE: IP Dam

Hey Mike, thanks for the info. I'd be interested in these drawings if you have a copy available. Thanks for getting back to me.

Dan Garren
208-525-7290

From: Beus, Michael W. [mailto:MBeus@usbr.gov]
Sent: Monday, August 16, 2010 3:12 PM
To: Garren,Dan
Subject: RE: IP Dam

Hi Dan,

The power plant intake is screened with 3/8" opening wedge wire. The wire panels are arranged in a tent fashion over the open top of the sloping pipe. Screen elevation ranges from about 6232.9 at

the contacts between the flat screen panels and the sides of the round pipe at the end to about 6250.3 at the peak where the screen panels join above the pipe about 60' downstream and up the slope.

Outlet trash racks are from elevation 6230 to 6354 and have 1" thick bars spaced at 6".

Spillway overflow starts at elevation 6302 and there is no structure to support a screen.

I have some drawings I can give you if you plan to be at the Watershed Council meeting on Thursday.

Mike

From: Garren,Dan [mailto:dan.garren@idfg.idaho.gov]
Sent: Monday, August 16, 2010 11:27 AM
To: Beus, Michael W.
Subject: IP Dam

Hey Mike, we are investigating the potential of kokanee entrainment on Island Park Dam, and were curious about the outlet gates on the dam. Specifically, what is the depth of the outlet gate (top and bottom depths), and at what reservoir level does water begin to go through the bypass? What is the spacing on the screen in front of the outlet gate? And is the bypass unscreened?

Thanks!

Dan Garren
Regional Fisheries Manager
Upper Snake Region
Idaho Department of Fish and Game
208-525-7290

From: Katie Sellers
To: "thomas.bassista@idfg.idaho.gov"
Cc: Laura Cowan
Subject: RE: Review of Island Park Hydro Information for Low Impact Hydropower Institute
Date: Monday, December 19, 2016 8:17:00 AM
Attachments: image002.png

Hi Tom,

Just following-up on the below items for Island Park.

Best,
Katie

Katie Sellers
Regulatory Coordinator
Kleinschmidt
Office: 207-416-1218
www.KleinschmidtGroup.com

From: Katie Sellers
Sent: Friday, December 02, 2016 3:16 PM
To: 'thomas.bassista@idfg.idaho.gov' <thomas.bassista@idfg.idaho.gov>
Cc: Laura Cowan <Laura.Cowan@KleinschmidtGroup.com>
Subject: RE: Review of Island Park Hydro Information for Low Impact Hydropower Institute

Hi Tom,

Just following-up on the below items for Island Park.

Do let me know if you have any questions.

Best,
Katie

Katie Sellers
Regulatory Coordinator
Kleinschmidt
Office: 207-416-1218

www.KleinschmidtGroup.com

From: Katie Sellers
Sent: Thursday, November 17, 2016 4:45 PM
To: 'thomas.bassista@idfg.idaho.gov' <thomas.bassista@idfg.idaho.gov>
Cc: 'dan.garren@idfg.idaho.gov' <dan.garren@idfg.idaho.gov>; Laura Cowan <Laura.Cowan@KleinschmidtGroup.com>
Subject: Review of Island Park Hydro Information for Low Impact Hydropower Institute

Hi Tom,
As I have mentioned in earlier emails, Kleinschmidt is helping Fall River Rural Electric Cooperative with applying for a Low Impact Hydropower Institute (LIHI) Certification for the Island Park Hydroelectric Project (FERC No. 2973). Since our last email exchanges LIHI has reviewed the draft Island Park application and requests the following follow-up input from Fish and Game prior to the submission of the final LIHI certification application:

1) Confirm the Project is in compliance with fish screen protections as included within License Article 128.
2) Confirm/or update the following list of threatened species that may have the potential to occur within the Project area:
   -Grizzly Bear (Threatened)
   -Canada Lynx (Threatened)
   -Ute Ladie's Tresses (Threatened)

If you could please provide feedback on the above topics at your earlier convenience, it would be much appreciated.

Thank you!
Katie

Katie Sellers
Regulatory Coordinator
Kleinschmidt
Office: 207-416-1218
www.KleinschmidtGroup.com

APPENDIX G

WATERSHED PROTECTION

20060824-0153 Issued by FERC OSEC 08/24/2006 in Docket#: P-2973-000

ENVIRONMENTAL INSPECTION REPORT
(ELECTRONICALLY SUBMITTED)
FEDERAL ENERGY REGULATORY COMMISSION

PORTLAND REGION

Date of Inspection: August 16, 2006

Name	Island Park	**Project No.**	2973
Licensee	Fall River Rural Electric Coop Inc.	**License Type**	Major
License Issued	October 19, 1998	**License Expires**	September 30, 2038
Location	Henry's Fork of Snake River **(Waterway)**		Targhee National Forest **(Reservation)**
	Fremont **(County)**		Idaho **(State)**
Inspector	Leslie Yaukey	**Date**	August 24, 2006

Licensee Representatives Brent Smith, Douglas Cutler

Other Participants Jim DeRito

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 Island Park Hydroelectric Project.

Headwater information: 6296.50 ft msl
Flow information: 1016 cfs

The licensee was in overall compliance with the license articles related to this inspection. The licensee was able to demonstrate compliance with all relevant articles through the examination of records, testing of works, and visual inspection of facilities. No matters requiring follow up actions were identified during the inspection.

Submitted August 24, 2006

Leslie Yaukey

Leslie Yaukey
Scientist

A. PROJECT PROFILE

The Island Park Hydroelectric Project is owned and operated by Fall River Rural Electric Coop Inc. It is located on Henry's Fork of the Snake River in Fremont County, Idaho. The project also occupies land in the Targhee National Forest. Island Park is a run-of-river project that uses the flows released from Island Park Reservoir under the direction of the Bureau of Reclamation (Bureau).

The project consist of: a 60 foot long screened intake, a 10 foot diameter steel siphon penstock approximately 740 feet long, a 48 foot by 52 foot concrete and masonry powerhouse with two 2400 kW vertical Francis turbines/generators, and a 60 foot by 100 foot concrete aeration basin. Additional structures include a 16 foot by 30 foot concrete masonry valve house located on top of Island Park dam, and a 13 foot by 16 foot concrete and masonry battery house adjacent to the Bureau's gatehouse on the west side of the dam.

B. INSPECTION FINDINGS

Requirements	Date of Requirement	Follow-Up Needed	Photo Nos.
FISH & WILDLIFE RESOURCES			
Standard Article 8 requires the installation and maintenance of gages and stream gaging stations.*	**O:** 10/19/88	No	1,2
Standard Article 15 requires the Licensee to, for the conservation and development of fish and wildlife resources, construct, maintain, and operate, or arrange for the construction, maintenance, and operation of such reasonable facilities.*	**O:** 10/19/88	No	1,2
Article 106 requires licensee to develop and file a study for water quality in Henry's Fork.	**O:** 10/19/88	No	--
Article 107 requires licensee to consult with Forest Service, US Fish and Wildlife Service, Idaho Department of Fish and Game and Idaho Department of Health and Welfare and file a long term water quality monitoring and mitigation procedure plan.	**O:** 10/19/88 **A:** 4/17/03	No	--
Article 119 requires licensee to revegetate any lands that are disturbed in construction of project facilities.	**O:** 10/19/88	No	--
Article 125 requires licensee to maintain a reservoir surface elevation of 6,289 feet. If it is necessary to lower the water level the licensee must consult IDF&G and develop a mitigation plan.	**O:** 10/19/88	No	--
Article 128 requires the licensee to design intake structure and fish screen within 6 months of issuance.	**O:** 10/19/88 **AP:** 9/23/92	No	--
Article 130 requires the installation of continuous total gas and temperature monitoring equipment below the powerhouse.	**O:** 10/19/88 **F:** 08/25/03	No	--
Article 401 require licensee to operate Island Park Dam Project so that all water released downstream in the Henry's Fork River will not contain 7mg/L or DO or the level of DO as monitored at the dam outlet structure,	**O:** 10/19/88	No	--

Requirements	Date of Requirement	Follow-Up Needed	Photo Nos.
whichever is higher.			
Article 402 requires the licensee to operate so that the temperature downstream will not be 1) lower than 3 degrees Celsius, 2) higher than 13 degrees C and a daily average of 9 degrees C from March 1-June 30 and Oct 1-Nov 30, and higher than 17 degrees C from July 1– Sept 30 for the purpose of maintaining state water quality standards and aquatic resources.	**O:** 10/19/88	No	--
Article 403 requires licensee to limit the ramping rate from Island Park Dam Project to 50 cfs every ½ hour upramping and 50cfs every ½ hour downramping from 7pm-5am for the enhancement of fish and wildlife resources.	**O:** 10/19/88 **A:** 02/06/97	No	--
CULTURAL RESOURCES			
Article 405 requires licensee to consult with SHPO prior to any future land disturbing activities within the project boundary. If archeological or historic properties are discovered a CRMP should be filed	**O:** 10/19/88	No	--
RECREATION RESOURCES			
Standard Article 17 requires the licensee to construct, maintain, and operate, or shall arrange for the construction, maintenance, and operation of such reasonable recreational facilities, including modifications thereto, such as access roads, wharves, launching ramps, beaches, picnic and camping areas, sanitary facilities, and utilities, giving consideration to the needs of the physically handicapped, and shall comply with such reasonable modifications of the project.*	**O:** 10/19/88	No	4,5,6
Standard Article 18 requires Licensee to allow free public access to project waters and adjacent lands.*	**O:** 10/19/88	No	--
Article 133 requires licensee to revise recreation resources report within 18 months of license issuance.	**O:** 10/19/88 **AP:** 9/18/92	No	--
Article 406 requires the licensee to schedule construction activities between Labor Day and May 15 to avoid peak recreation season.	**O:** 10/19/88	No	--
Article 407 requires licensee to replace and maintain Brimstone cross-country ski trail that would be disturbed by project construction and operation.	**O:** 10/19/88	No	--
Part 8 requirements: Recreation signage and posting (18 CFR, Part 8).		No	--
PUBLIC SAFETY			
Facilities and measures to ensure public safety (18 CFR, Part 12). Public Safety Plan filed.	03/1995	No	7, 8
OTHER ENVIRONMENTAL RESOURCES			
Standard Article 14 requires the Licensee to maintain suitable structures and devices to reduce to a reasonable	**O:** 10/19/88	No	--

Requirements	Date of Requirement	Follow-Up Needed	Photo Nos.
degree the liability of contact between its transmission lines and telegraph, telephone and other signal wires or power transmission lines constructed prior to its transmission lines and not owned by the Licensee, and shall also place and maintain suitable structures and devices to reduce to a reasonable degree the liability of any structures and devices to reduce to a reasonable degree the liability of any structures or wires falling or obstructing traffic or endangering life.*			
Standard Article 19. In the construction, maintenance, or operation of the project, the Licensee shall be responsible for, and shall take reasonable measures to prevent, soil erosion on lands adjacent to streams or other waters, stream sedimentation, and any form of water or air pollution.*	**O:** 10/19/88	No	--
Standard Article 20 requires the Licensee consult with the appropriate State and Federal agencies and, within one year of the date of issuance of this license, shall submit for Commission approval a plan for clearing the reservoir area. Further, the Licensee shall clear and keep clear to an adequate width 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 results from the clearing of lands or from the maintenance or alteration of the project works.*	**O:** 10/19/88	No	--
Standard Article 28. The Licensee shall make use of the Commission's guidelines and other recognized guidelines for treatment of transmission line rights-of-way, and shall clear such portions of transmission line rights-of-way.*	**O:** 10/19/88	No	--
Article 102 requires licensee to obtain written approval of FS prior to any land disturbing activity for project components which the Forest Service (FS) deems as affecting or potentially affecting National Forest System resources.	**O:** 10/19/88	No	--
Article 108 requires the licensee to develop a plan to control erosion, stream sedimentation, dust, and soil mass movement.	**O:** 10/19/88	No	--
Article 109 requires the licensee to develop a plan for the disposal and treatment of solid waste and wastewater generated during construction and operation of the project.	**O:** 10/19/88	No	--
Article 110 requires the licensee to develop a plan for oil and hazardous substance storage, spill prevention, and cleanup.	**O:** 10/19/88	No	--
Article 111 requires licensee to plan for storage and/or disposal of excess construction/tunnel spoils and slide material.	**O:** 10/19/88	No	--
Article 112 requires licensee to file a plan approved by the FS for the construction of project facilities so that visual character will be preserved or enhanced.	**O:** 10/19/88	No	--
Article 131 requires a plan to control erosion, dust, slope stability, and to minimize the quantity of sediment or other potential water pollutants from construction and	**O:** 10/19/88	No	--

Requirements	Date of Requirement	Follow-Up Needed	Photo Nos.
operation of the project.			
Article 203 requires licensee to keep clear an adequate width of all lands along open conduits and shall dispose of all temporary structures, unused timber, brush, refuse, or other materials not used in project operation.	**O:** 10/19/88	No	--
Article 301 requires licensee to start construction of project within 2 years of license issuance and finish within 4 years of issuance.	**O:** 10/19/88	No	--
Article 408 gives licensee authority to grant permission for certain types of use or occupancy of project lands and waters without prior Commission approval.	**O:** 10/19/88	No	--

O:=Ordered **18 CFR**= Title 18 code of Federal Regulations **AP:**= Approved **A**=Amended **F**=Filed

* Form L-2 Standard Articles for Unconstructed Major Project Affecting Lands of the United States. (October, 1975)

C. COMMENTS AND FOLLOW-UP

The licensee was in overall compliance with the license articles related to this inspection. The licensee was able to demonstrate compliance with all relevant articles through the examination of records, testing of works, and visual inspection of facilities. The following other comments are included as part of the inspection process:

(1) Fish and Wildlife Resources: The licensee maintains a gage at the same location as the USGS gage. This records the flow data (Photo 1). The Bureau is in control of the reservoir elevation. The licensee monitors water quality, water temperature, and total gas at different gaging stations. One water quality monitor is located inside the powerhouse and another is located downstream near the handicap fishing dock (Photo 2). There is a fish screen/trashrack with 3/8 inch wide grate installed at the intake, which is located at the bottom of the reservoir about 400 feet upstream. There is a cement penstock, seen just on the upstream side of the dam (Photo 3). A diver is sent down yearly to inspect and clean the grate, which so far, has yet needed to be cleaned. For article 403, the licensee is ramping all the time and only stops at the request of the Bureau. The licensee has filed all required documents and is in compliance with fish and wildlife article requirements.

(2) Recreation Resources: The main recreation on the river and around the project is fishing but the reservoir is used for recreational boating, as well. Downstream from the dam is an upgraded parking area and handicap accessible fishing platform (Photo 4). An undeveloped boat ramp is used along the bank of the river, for putting-in and taking-out boats (Photo 5). There is also a trail leading uphill to the newly added restroom facility, along with the USGS/Island Park gage, and an upgraded parking area (Photo 6).

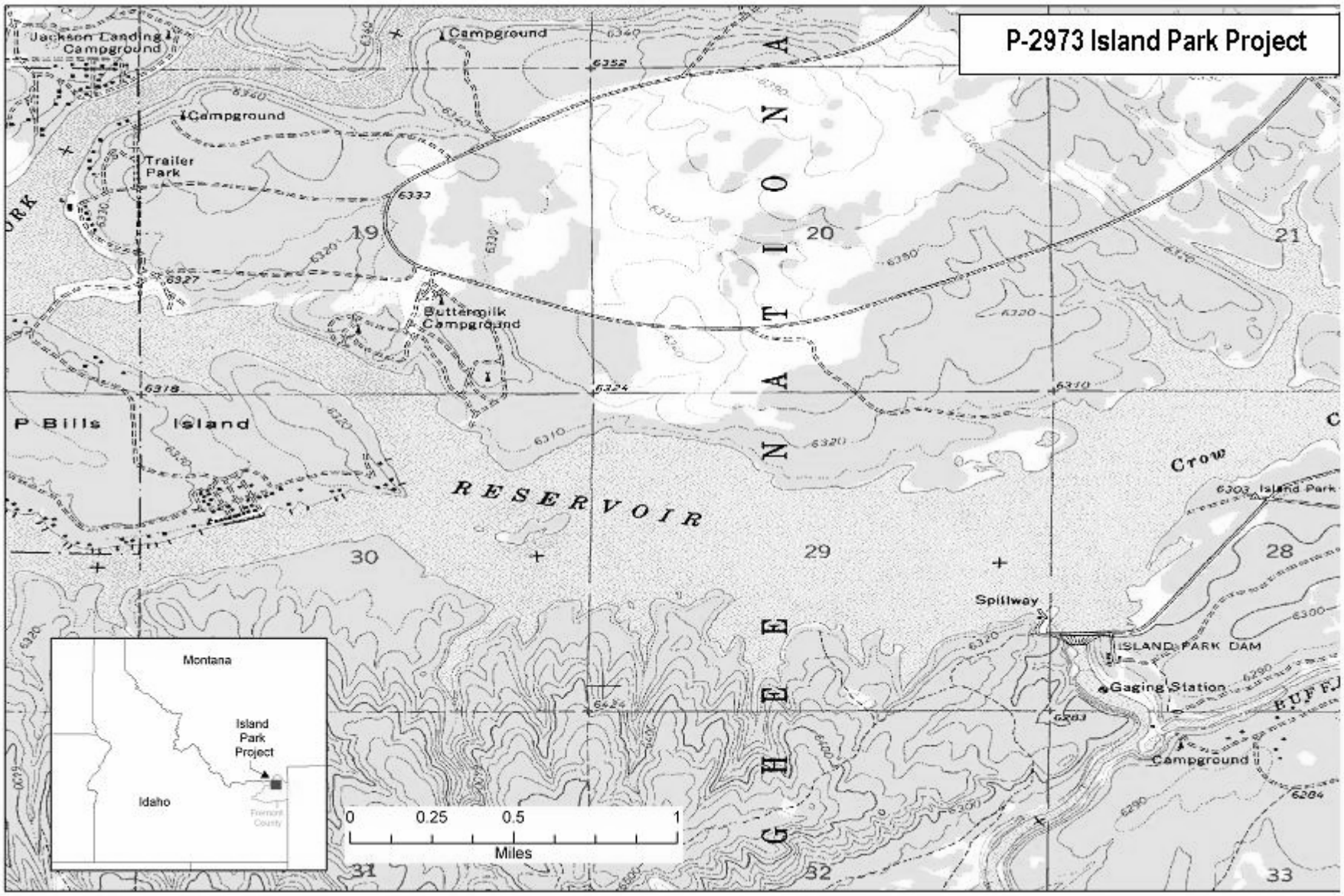
(3) Cultural Resources: There are no land-clearing or land-disturbing activities planned in the foreseeable future by the licensee that would require consultation with the SHPO. The licensee is in compliance with the license article related to cultural resources.

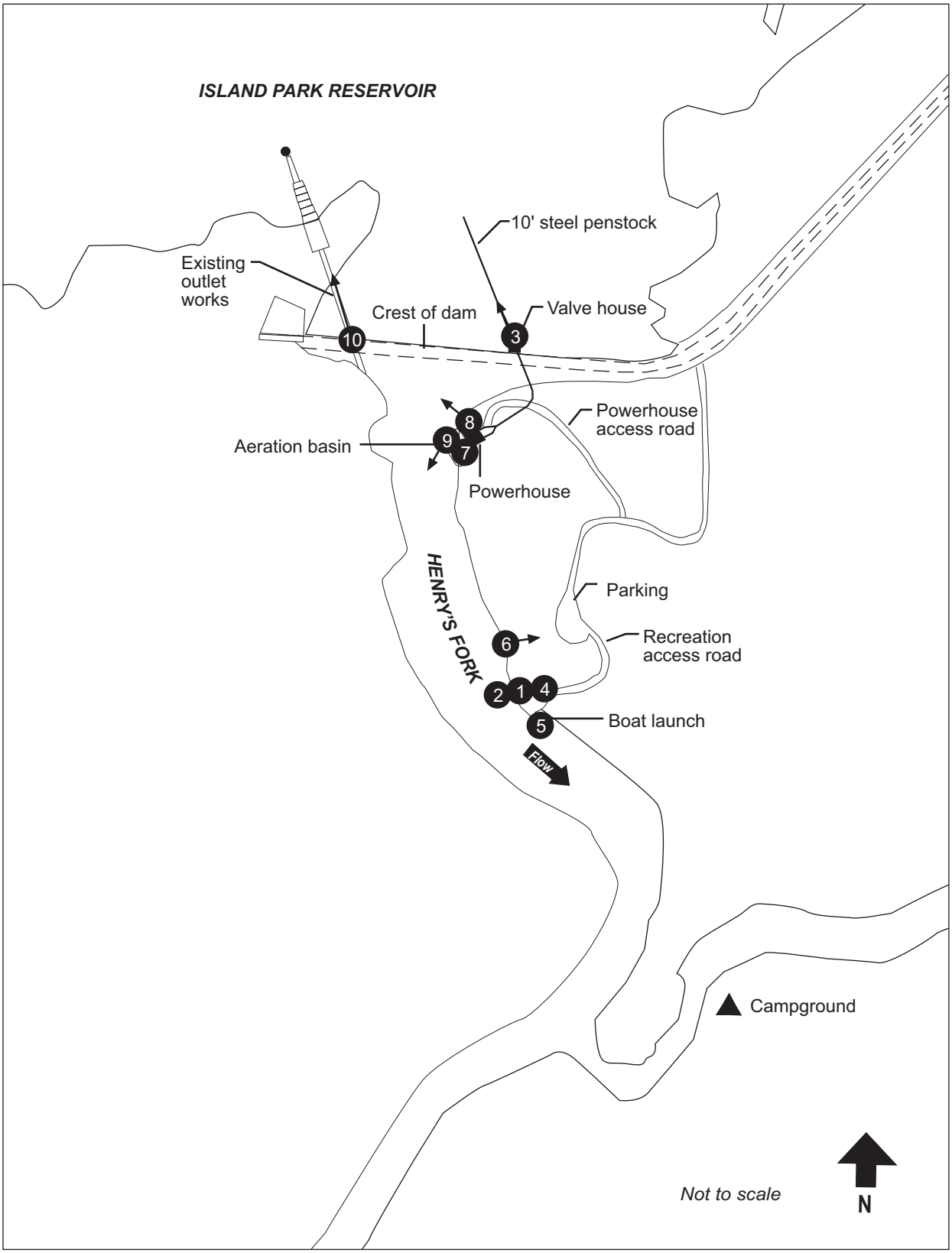
(4) Public Safety: The public safety plan for this project was filed in 1995. The access road to the powerhouse has a gate and is kept locked, therefore only allowing public access by foot to the powerhouse and river. The aeration basin has a fence around it to forbid public access as well as many well posted warning signs (Photo 7). The powerhouse, valve house, and battery house area kept locked and have lights on the outside of the buildings. The old Bureau structure is now used for excess water and as a release if something malfunctions in the powerhouse (Photo 8). There is a horn, lights, and signs near the powerhouse to warn public of flow changes. The licensee is in compliance with public safety requirements.

(5) Other Environmental Resources: Project lands are kept clear of debris and other non-used materials. No new or on-going erosion problems exist. Fulfilling article 410, the licensee keeps a spill barrel in the powerhouse for any emergency spills. The licensee also has a special use permit from the Forest Service (FS) to be on the land because the land is owned by the FS and the dam is owned by the Bureau. The licensee is in compliance with all license articles related to other environmental resources.

D. EXHIBITS AND PHOTOGRAPHS

The following are provided to show the location of the project and to illustrate project features: project and photo location maps and 10 photographs.





P-2973 Island Park

Photo #1: View of Island Park gage located at the same location as the USGS gage. This gage measures river flow and ramping rate.

Photo #2: View of water quality gage /monitor located near the boat ramp and handicap fishing dock downstream of the Island Park project powerhouse.

Photo #3: View of cement penstock leading to the intake at the bottom of the reservoir (arrow).

Photo #4: View of handicap fishing platform from the parking area.

Photo #5: View of undeveloped boat ramp.

Photo #6: View of trail to restroom facility. The arrow points to the roof of the restroom. There is also a parking area and the building the right corner of the picture is the USGS gaging station.

Photo #7: View of aeration basin at the powerhouse. This basin is about 20 feet deep. Notice the basin is fenced off to restrict any public access.

Photo #8: View of the old Bureau structure now used for excess water and as an emergency release. Notice the light and sign on the fencing above the structure.

Photo #9: View of the tailrace from the powerhouse.

Photo #10: View of the spillway at the dam and the reservoir upstream. The arrow points to the rubber extensions used on the spillway.

APPENDIX H

THREATENED AND ENDANGERED SPECIES

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, ID

Group	Name	Population	Status	Lead Office	Recovery Plan Name	Recovery Plan Action Status	Recovery Plan Stage
Conifers and Cycads	Whitebark pine (*Pinus albicaulis*)		Candidate	Wyoming Ecological Services Field Office	-	-	-
Flowering Plants	Ute ladies'-tresses (*Spiranthes diluvialis*)		Threatened	Utah Ecological Services Field Office	Ute Ladies'-Tresses Draft Recovery Plan	Implementation Progress	Draft
Mammals	Grizzly bear (*Ursus arctos horribilis*)	lower 48 States, except where listed as an experimental population or delisted	Threatened	Grizzly Bear Recovery Coordinator	Revised Grizzly Bear Recovery Plan	Implementation Progress	Final Revision 1
	Gray wolf (*Canis lupus*)	Northern Rocky Mountain DPS	Recovery	Office of the Regional Director	-	-	-
	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

Export options: CSV | EXCEL | XML | PDF

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United States Department of the Interior

FISH AND WILDLIFE SERVICE
Boise Field Station
4696 Overland Road, Room 576
Boise, Idaho 83705

August 27, 1992

ORIGINAL
P-2973

Hal Gibbs, District Ranger
Island Park Ranger District
P.O. Box 20
Island Park, Idaho 83429

Subject: Section 7 Consultation - Island Park Hydroelectric Project and Bald Eagle Mitigation Plan (FERC 2973/116.0300/1-4-92-I-F)

Dear Mr. Gibbs:

On August 7, 1992 an interagency meeting was held at the U.S. Fish and Wildlife Service Office with the principal environmental contractors for Fall River Rural Electric Cooperative. We discussed the "terms and conditions" under Section 7 of the Endangered Species Act for maintaining the bald eagle resource in the vicinity of Island Park Dam during the construction phase of Island Park Hydroelectric Project. We asked Ecosystems Research Institute Inc.(ERI) to develop a suitable strategy that the Fish and Wildlife Service could review and approve for the "terms and conditions" of the Section 7 consultation.

On August 19, 1992, we received a document from ERI titled "Mitigation Plan for Bald Eagles during the Construction of the Island Park Hydroelectric Project (Plan)." On August 24, 1992, we received comments from Michael B. Whitfield, Leader, Idaho/GYE Bald Eagle Research Project concerning the ERI mitigation plan. After reviewing both documents, the Service finds that the guidance and suggestions made by Mr. Whitfield should be considered by ERI in implementing the Plan. Only through careful monitoring and readjustments of feeding regimes and site locations for feeding stations will this Plan be a success during the construction phase.

We would make one further suggestion in attempting to implement the floating fish strategy found on page 5 of ERI's Plan. We recommend that under the Initial Study phase that a break-away fish strategy be tried. Fish would be floated but not down river. A light-weight cotton string, 4-6 feet long, should be attached to the dead fish, with the other end of the string anchored to a weight to prevent the fish from floating downriver. This strategy might successfully be employed near gravel bars. Bald eagles would take the fish and the string would break-away from the weight. Using cotton string would not be detrimental to the eagle if it was ingested whereas monofilament line might lodge in the digestive tract and cause intestinal blockages.

cf

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In conclusion, with implementation of the Plan and consideration given to the specific comments of Mike Whitfield by ERI, the Fish and Wildlife Service has a high level of confidence that the "terms and condition" of the Section 7 consultation can be met. It is our intent to expedite the final Section 7 consultation so that pending permits for the project can be finalized and project construction can begin. Should you have any questions, please contact Rich Howard of my staff.

Sincerely,

For Charles H. Lobdell
Field Supervisor

cc: IDFG, R-6, Idaho Falls
IDFG, Hdqtrs.(Attn: B. Horton)
FERC, D.C., (Attn: J. Estep)
CE, Walla Walla, WA (Attn: B. Daley)
ERI, Inc., Logan, Utah
Fall River Rural Electric Cooperative
Fisheries West, Boise

Island Park Hydroelectric Project (FERC No. 2973)

Low Impact Hydroelectric Power Facility Certification

1. Contact Information for person completing the questionnaire:

Name & Title: GARY VECCHIO NATURAL RESOURCE PLAN COORD
Organization: **Idaho Department of Fish and Game**
Address:

Phone: 208 525 7290
Email: GARY.VECCHIO@IDFG.IDAHO.GOV

2. To the best of your knowledge, is the Island Park Hydroelectric Project (FERC License No. 2973) 1997 Amended License Article 403 *Ramping Rate Monitoring Plan* still valid?

☒ Yes ☐ No

☐ N/A or Unknown. If N/A or Unknown please explain:

2(a) Is the Island Park Hydroelectric Project (FERC Project No. 2973) currently in compliance with the 1997 Amended License Article 403 *Ramping Rate Monitoring Plan*?

☐ Yes ☐ No

☒ N/A or Unknown. If N/A or Unknown please explain: (HISTORICALLY) RAMPING RATE REPORTS SEE OFTEN HAVE FISH OUTSIDE RATES REQUIRED.

3. To the best of your knowledge, are Island Park Hydroelectric Project (FERC License No. 2973) operations in compliance with flow standards?

☒ Yes ☐ No

☐ N/A or Unknown. If N/A or Unknown please explain:

OUTSIDE OF #2a ARTICLE

4. To the best of your knowledge, is the Island Park Hydroelectric Project (FERC License No. 2973) 1992 Amended License Article 128 *Fish Screen* still valid?

☐ Yes ☐ No

☒ N/A or Unknown. If N/A or Unknown please explain:

4(a) Is the Island Park Hydroelectric Project (FERC Project No. 2973) currently in compliance with the 1992 Amended License Article 128 *Fish Screen*?

☐ Yes ☐ No

☒ N/A or Unknown. If N/A or Unknown please explain:

5. To the best of your knowledge, do Island Park Hydroelectric Project (FERC License No. 2973) 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:

If you have any additional comments, please provide them here: I STRONGLY SUSPECT ALL FISH SCREEN ARTICLES ARE IN COMPLIANCE, I JUST DONT HAVE FIRST-HAND KNOWLEDGE

Please return this Questionnaire to Laura Cowan by email at Laura.Cowan@KleinschmidtGroup.com within 15 days of receipt.

From: Katie Sellers
To: "thomas.bassista@idfg.idaho.gov"
Cc: Laura Cowan
Subject: RE: Review of Island Park Hydro Information for Low Impact Hydropower Institute
Date: Monday, December 19, 2016 8:17:00 AM
Attachments: image002.png

Hi Tom,

Just following-up on the below items for Island Park.

Best,
Katie

Katie Sellers
Regulatory Coordinator
Kleinschmidt
Office: 207-416-1218
www.KleinschmidtGroup.com

From: Katie Sellers
Sent: Friday, December 02, 2016 3:16 PM
To: 'thomas.bassista@idfg.idaho.gov' <thomas.bassista@idfg.idaho.gov>
Cc: Laura Cowan <Laura.Cowan@KleinschmidtGroup.com>
Subject: RE: Review of Island Park Hydro Information for Low Impact Hydropower Institute

Hi Tom,

Just following-up on the below items for Island Park.

Do let me know if you have any questions.

Best,
Katie

Katie Sellers
Regulatory Coordinator
Kleinschmidt
Office: 207-416-1218

www.KleinschmidtGroup.com

From: Katie Sellers
Sent: Thursday, November 17, 2016 4:45 PM
To: 'thomas.bassista@idfg.idaho.gov' <thomas.bassista@idfg.idaho.gov>
Cc: 'dan.garren@idfg.idaho.gov' <dan.garren@idfg.idaho.gov>; Laura Cowan <Laura.Cowan@KleinschmidtGroup.com>
Subject: Review of Island Park Hydro Information for Low Impact Hydropower Institute

Hi Tom,
As I have mentioned in earlier emails, Kleinschmidt is helping Fall River Rural Electric Cooperative with applying for a Low Impact Hydropower Institute (LIHI) Certification for the Island Park Hydroelectric Project (FERC No. 2973). Since our last email exchanges LIHI has reviewed the draft Island Park application and requests the following follow-up input from Fish and Game prior to the submission of the final LIHI certification application:

1) Confirm the Project is in compliance with fish screen protections as included within License Article 128.
2) Confirm/or update the following list of threatened species that may have the potential to occur within the Project area:
   -Grizzly Bear (Threatened)
   -Canada Lynx (Threatened)
   -Ute Ladie's Tresses (Threatened)

If you could please provide feedback on the above topics at your earlier convenience, it would be much appreciated.

Thank you!
Katie

Katie Sellers
Regulatory Coordinator
Kleinschmidt
Office: 207-416-1218
www.KleinschmidtGroup.com

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	Accipiter cooperii	Cooper's Hawk	G5	S4						idapa-protection-nongame		
Fremont	Accipiter gentilis	Northern Goshawk	G5	S4			Sensitive	Sensitive	TYPE 3	idapa-protection-nongame		
Fremont	Accipiter striatus	Sharp-shinned Hawk	G5	S5						idapa-protection-nongame		
Fremont	Actitis macularia	Spotted Sandpiper	G5	S5B						idapa-protection-nongame		
Fremont	Aechmophorus	Aechmophorus sp.				Yes				idapa-protection-nongame		
Fremont	Aechmophorus clarkii	Clark's Grebe	G5	S2B		Yes				idapa-protection-nongame		
Fremont	Aechmophorus occidentalis	Western Grebe	G5	S2B		Yes				idapa-protection-nongame		
Fremont	Aegolius funereus	Boreal Owl	G5	S2		Yes		Sensitive	TYPE 5	idapa-protection-nongame		
Fremont	Agelaius phoeniceus	Red-winged Blackbird	G5	S5B,S3N						idapa-protection-nongame		
Fremont	Agoseris lackschewitzii	Pink Agoseris	G4	S2				Sensitive	TYPE 4		State Sensitive	
Fremont	Ambystoma tigrinum	Tiger Salamander	G5	S5						idapa-protection-nongame		
Fremont	Ameletus sparsatus	A Mayfly	G3G4	S2		Yes						
Fremont	Anas acuta	Northern Pintail	G5	S5B,S2N		Yes				idapa-protection-game		
Fremont	Aquila chrysaetos	Golden Eagle	G5							idapa-protection-nongame		
Fremont	Ardea alba	Great Egret	G5	S1B		Yes				idapa-protection-nongame		

Fremont	Ardea herodias	Great Blue Heron	G5	S5B,S5N						idapa-protection-nongame		
Fremont	Astragalus bisulcatus var. bisulcatus	Two-grooved Milkvetch	G5T5	S2					TYPE 4		State Sensitive	
Fremont	Astragalus gilviflorus	Plains Milkvetch	G5	S2					TYPE 3		State Sensitive	
Fremont	Aythya affinis	Lesser Scaup	G5	S3		Yes				idapa-protection-game		
Fremont	Bartramia longicauda	Upland Sandpiper	G5	S1B		Yes			TYPE 4	idapa-protection-nongame		
Fremont	Boloria kriemhild	Kriemhild Fritillary	G3G4	S2		Yes						
Fremont	Botaurus lentiginosus	American Bittern	G4	S4B						idapa-protection-nongame		
Fremont	Brachylagus idahoensis	Pygmy Rabbit	G4	S2		Yes		Sensitive	TYPE 2	idapa-protection-game		
Fremont	Bubo virginianus	Great Horned Owl	G5	S5						idapa-protection-nongame		
Fremont	Bucephala islandica	Barrow's Goldeneye	G5	S3B,S3N					TYPE 5	idapa-protection-game		
Fremont	Bufo boreas	Western Toad	G4	S4			Sensitive		TYPE 2/TYPE 3	idapa-protection-nongame		
Fremont	Buteo jamaicensis	Red-tailed Hawk	G5	S5B,S5N						idapa-protection-nongame		
Fremont	Buteo regalis	Ferruginous Hawk	G4	S3B		Yes			TYPE 3	idapa-protection-nongame		
Fremont	Calcarius mccownii	McCown's Longspur	G4	SNA						idapa-protection-nongame		
Fremont	Calidris melanotos	Pectoral Sandpiper	G5	SNA						idapa-protection-nongame		

Fremont	Calidris minutilla	Least Sandpiper	G5	S2N						idapa-protection-nongame		
Fremont	Canis Lupus	Gray Wolf	G4	S3	XN	Yes		Endangered	TYPE 1	idapa-protection-game		
Fremont	Carduelis psaltria	Lesser Goldfinch	G5	S2B		Yes				idapa-protection-nongame		
Fremont	Carex livida	Pale Sedge	G5	S2			Sensitive		TYPE 4		State Sensitive	
Fremont	Catoptrophorus semipalmatus	Willet	G5	S4B						idapa-protection-nongame		
Fremont	Centrocercus urophasianus	Greater-Sage Grouse	G4	S2	C	Yes		Sensitive	TYPE 2	idapa-protection-upland-game-bird		
Fremont	Charadrius vociferus	Killdeer	G5	S5B,S3N						idapa-protection-nongame		
Fremont	Charina bottae	Rubber Boa	G5	S5						idapa-protection-nongame		
Fremont	Chiroptera	Unclassified Bat								idapa-protection-nongame		
Fremont	Chlidonias niger	Black Tern	G4	S1B		Yes			TYPE 3	idapa-protection-nongame		
Fremont	Cicindela arenicola	Idaho Dunes Tiger Beetle	G1G2	S2		Yes			TYPE 2			
Fremont	Cicuta bulbifera	Bulb-bearing Waterhemlock	G5	S2			Sensitive		TYPE 4		State Sensitive	
Fremont	Circus cyaneus	Northern Harrier	G5	S5B,S5N						idapa-protection-nongame		
Fremont	Cistothorus palustris	Marsh Wren	G5	S5B						idapa-protection-nongame		
Fremont	Coccyzus americanus	Yellow-billed Cuckoo	G5	S2B	C	Yes			TYPE 1	idapa-protection-nongame		

Fremont	Corvus corax	Common Raven	G5	S5						idapa-protection-nongame		
Fremont	Corynorhinus townsendii	Townsend's Big-eared Bat	G4	S3		Yes	Sensitive	Sensitive	TYPE 3	idapa-protection-nongame		
Fremont	Cygnus buccinator	Trumpeter Swan	G4	S1B,S2N		Yes		Sensitive	TYPE 3	idapa-protection-game		
Fremont	Dendroica petechia	Yellow Warbler	G5	S5B						idapa-protection-nongame		
Fremont	Egretta thula	Snowy Egret	G5	S2B		Yes				idapa-protection-nongame		
Fremont	Empidonax traillii	Willow Flycatcher	G5	S5B					TYPE 3	idapa-protection-nongame		
Fremont	Epilobium palustre	Swamp Willow-weed	G5	S3			Sensitive		TYPE 5		State Monitor	
Fremont	Eptesicus fuscus	Big Brown Bat	G5	S4?						idapa-protection-nongame		
Fremont	Eriophorum viridicarinatum	Green Keeled Cotton-grass	G5	S2			Sensitive				State Priority 1	
Fremont	Euphydryas gillettii	Gillette's Checkerspot	G2G3	S3		Yes						
Fremont	Falco columbarius	Merlin	G5	S2B,S2N		Yes				idapa-protection-nongame		
Fremont	Falco peregrinus anatum	Peregrine Falcon	G4T4	S2B		Yes	Sensitive	Sensitive	TYPE 3	idapa-protection-nongame		
Fremont	Fluminicola fuscus	Columbia Pebblesnail	G2	S1					TYPE 3			
Fremont	Gavia immer	Common Loon	G5	S1B,S2N		Yes	Sensitive	Sensitive		idapa-protection-nongame		
Fremont	Geothlypis trichas	Common Yellowthroat	G5	S5B						idapa-protection-nongame		
Fremont	Glacicavicola bathyscioides	Blind Cave Leiodid Beetle	G1G3	S1		Yes			TYPE 2			

Fremont	Glaucidium gnoma	Northern Pygmy-Owl	G5	S4					TYPE 5	idapa-protection-nongame		
Fremont	Glaucomys sabrinus	Northern Flying Squirrel	G5	S4						idapa-protection-nongame		
Fremont	Grus americana	Whooping Crane	G1	SNA	XN			Endangered				
Fremont	Grus canadensis	Sandhill Crane	G5	S3B		Yes				idapa-protection-game		
Fremont	Gulo gulo luscus	North American Wolverine	G4T4	S2	C	Yes	Sensitive	Sensitive	TYPE 3	idapa-protection-nongame		
Fremont	Haliaeetus leucocephalus	Bald Eagle	G5	S3B,S4N		Yes		Threatened	TYPE 1	idapa-protection-nongame		
Fremont	Himantopus mexicanus	Black-necked Stilt	G5	S3B		Yes				idapa-protection-nongame		
Fremont	Larus argentatus	Herring Gull	G5	S2N						idapa-protection-nongame		
Fremont	Larus californicus	California Gull	G5	S2B,S3N		Yes				idapa-protection-nongame		
Fremont	Larus delawarensis	Ring-billed Gull	G5	S2S3B,S3N						idapa-protection-nongame		
Fremont	Larus philadelphia	Bonaparte's Gull	G5	SNA						idapa-protection-nongame		
Fremont	Larus pipixcan	Franklin's Gull	G4G5	S2B		Yes				idapa-protection-nongame		
Fremont	Lasionycteris noctivagans	Silver-haired Bat	G5	S4?						idapa-protection-nongame		
Fremont	Lasiurus cinereus	Hoary Bat	G5	S4?						idapa-protection-nongame		

Fremont	Limnodromus scolopaceus	Long-billed Dowitcher	G5	S2N						idapa-protection-nongame		
Fremont	Limosa fedoa	Marbled Godwit	G5	S2N						idapa-protection-nongame		
Fremont	Lophodytes cucullatus	Hooded Merganser	G5	S2B,S3N		Yes				idapa-protection-game		
Fremont	Loxia leucoptera	White-winged Crossbill	G5	S1		Yes				idapa-protection-nongame		
Fremont	Lycopodiella inundata	Northern Bog Clubmoss	G5	S2			Sensitive				State Priority 2	
Fremont	Lynx canadensis	Lynx	G5	S1	LT	Yes		Sensitive	TYPE 1	idapa-protection-game		
Fremont	Margaritifera falcata	Western Pearlshell	G4G5	S3		Yes						
Fremont	Martes pennanti	Fisher	G5	S1		Yes	Sensitive	Sensitive	TYPE 3	idapa-protection-game		
Fremont	Melospiza melodia	Song Sparrow	G5	S5B,S5N						idapa-protection-nongame		
Fremont	Molothrus ater	Brown-headed Cowbird	G5	S5B						idapa-protection-nongame		
Fremont	Myotis ciliolabrum	Western Small-footed Myotis	G5	S4?					TYPE 5	idapa-protection-nongame		
Fremont	Myotis evotis	Long-eared Myotis	G5	S3?					TYPE 5	idapa-protection-nongame		
Fremont	Myotis lucifugus	Little Brown Myotis	G5	S5						idapa-protection-nongame		
Fremont	Myotis volans	Long-legged Myotis	G5	S3?					TYPE 5	idapa-protection-nongame		
Fremont	Myotis yumanensis	Yuma Myotis	G5	S3?					TYPE 5	idapa-protection-nongame		

Fremont	Neotamias minimus	Least Chipmunk	G5	S5						idapa-protection-nongame		
Fremont	Neotamis amoenus	Yellow-pine Chipmunk	G5	S5						idapa-protection-nongame		
Fremont	Numenius americanus	Long-billed Curlew	G5	S2B		Yes			TYPE 5	idapa-protection-nongame		
Fremont	Nycticorax nycticorax	Black-crowned Night-Heron	G5	S2B		Yes				idapa-protection-nongame		
Fremont	Oenothera psammophila	St. Anthony Evening Primrose	G3	S3					TYPE 2		Global Priority 3	INPS Threats: 8
Fremont	Oreoscoptes montanus	Sage Thrasher	G5	S5B					TYPE 5	idapa-protection-nongame		
Fremont	Otus flammeolus	Flammulated Owl	G4	S3B		Yes	Sensitive	Sensitive	TYPE 3	idapa-protection-nongame		
Fremont	Pandion haliaetus	Osprey	G5	S5B						idapa-protection-nongame		
Fremont	Pelecanus erythrorhynchos	American White Pelican	G3	S1B		Yes			TYPE 2	idapa-protection-nongame		
Fremont	Phalacrocorax auritus	Double-crested Cormorant	G5	S2B						idapa-protection-nongame		
Fremont	Phalaropus tricolor	Wilson's Phalarope	G5	S3B		Yes			TYPE 5	idapa-protection-nongame		
Fremont	Picea glauca	White Spruce	G5	S1					TYPE 4		State Priority 2	
Fremont	Picoides arcticus	Black-backed Woodpecker	G5	S3			Sensitive		TYPE 5	idapa-protection-nongame		
Fremont	Plegadis chihi	White-faced Ibis	G5	S2B		Yes			TYPE 4	idapa-protection-nongame		

Fremont	Podiceps auritus	Horned Grebe	G5	S1?						idapa-protection-nongame		
Fremont	Podiceps grisegena	Red-necked Grebe	G5	S2B		Yes				idapa-protection-nongame		
Fremont	Podiceps nigricollis	Eared Grebe	G5	S4B						idapa-protection-nongame		
Fremont	Podilymbus podiceps	Pied-billed Grebe	G5	S4B,S3N						idapa-protection-nongame		
Fremont	Porzana carolina	Sora	G5	S5B						idapa-protection-nongame		
Fremont	Progne subis	Purple Martin	G5	S1?B						idapa-protection-nongame		
Fremont	Pseudacris maculata	Boreal Chorus Frog	G5	S4						idapa-protection-nongame		
Fremont	Rallus limicola	Virginia Rail	G5	S5B						idapa-protection-nongame		
Fremont	Rana luteiventris	Columbia Spotted Frog	G4	S3S4				Sensitive	TYPE 1	idapa-protection-nongame		
Fremont	Rana pipiens	Northern Leopard Frog	G5	S2		Yes			TYPE 2	idapa-protection-nongame		
Fremont	Recurvirostra americana	American Avocet	G5	S5B		Yes				idapa-protection-nongame		
Fremont	Salix candida	Hoary Willow	G5	S2			Sensitive		TYPE 4		State Sensitive	
Fremont	Salix pseudomonticola	False Mountain Willow	G4G5	S1					TYPE 3		State Priority 2	
Fremont	Sceloporus graciosus	Sagebrush Lizard	G5	S5						idapa-protection-nongame		
Fremont	Scheuchzeria palustris	Pod Grass	G5	S2			Sensitive				State Priority 2	

Fremont	Schoenoplectus subterminalis	Water Clubrush	G4G5	S3			Sensitive		TYPE 4		State Sensitive	
Fremont	Seiurus noveboracensis	Northern Waterthrush	G5	S3?						idapa-protection-nongame		
Fremont	Spermophilus elegans	Wyoming Ground Squirrel	G5	S4?		Yes				idapa-protection-nongame		
Fremont	Spermophilus lateralis	Golden-mantled Ground Squirrel	G5	S5						idapa-protection-nongame		
Fremont	Sphyrapicus thyroideus	Williamson's Sapsucker	G5	S5B					TYPE 3	idapa-protection-nongame		
Fremont	Spiranthes diluvialis	Ute Ladies' Tresses	G2	S1	T				TYPE 1		Global Priority 3	
Fremont	Spizella breweri	Brewer's Sparrow	G5	S3B		Yes			TYPE 3	idapa-protection-nongame		
Fremont	Stagnicola hinkleyi	Rustic Pondsnail	G2	S1		Yes						
Fremont	Sterna caspia	Caspian Tern	G5	S2B		Yes				idapa-protection-nongame		
Fremont	Sterna forsteri	Forster's Tern	G5	S1B		Yes				idapa-protection-nongame		
Fremont	Sterna hirundo	Common Tern	G5	S1B						idapa-protection-nongame		
Fremont	Strix nebulosa	Great Gray Owl	G5	S3				Sensitive	TYPE 5	idapa-protection-nongame		
Fremont	Surnia ulula	Northern Hawk-owl	G5	SNA						idapa-protection-nongame		
Fremont	Symphyotrichum boreale	Rush Aster	G5	S2			Sensitive		TYPE 4		State Sensitive	
Fremont	Tamiasciurus hudsonicus	Red Squirrel	G5	S5						idapa-protection-nongame		

Fremont	Thalictrum dasycarpum	Purple Meadow-rue	G5	S1					TYPE 3		State Priority 1	
Fremont	Thamnophis elegans	Western Terrestrial Garter Snake	G5	S5						idapa-protection-nongame		
Fremont	Thamnophis sirtalis	Common Garter Snake	G5	S5					TYPE 3	idapa-protection-nongame		
Fremont	Tringa flavipes	Lesser Yellowlegs	G5	S2N						idapa-protection-nongame		
Fremont	Tringa melanoleuca	Greater Yellowlegs	G5	S2N						idapa-protection-nongame		
Fremont	Tympanuchus phasianellus columbianus	Columbian Sharp-tailed Grouse	G4T3	S1		YES		Sensitive	TYPE 3	idapa-protection-upland-game-bird		
Fremont	Ursus arctos	Grizzly Bear	G4	S1	LT				TYPE 1			
Fremont	Xanthocephalus xanthocephalus	Yellow-headed Blackbird	G5	S5B						idapa-protection-nongame		

APPENDIX I

CULTURAL RESOURCES

Recieved 8/25/2016

Island Park Hydroelectric Project (FERC No. 2973)

Low Impact Hydroelectric Power Facility Certification

1. Contact Information for person completing the questionnaire:

Name & Title: Ethan Morton
Organization: **Idaho State Historic Preservation Office**
Address: 210 Main St
Boise, ID 83702
Phone: 208 334 3861 x 107
Email: ethan.morton@ishs.idaho.gov

2. To the best of your knowledge, is the Island Park Hydroelectric Project (FERC License No. 2973) License Article 405 *State Historic Preservation Office Consultation* still valid?

☑ Yes ☐ No

☐ N/A or Unknown. If N/A or Unknown please explain:

2(a) Is the Island Park Hydroelectric Project (FERC Project No. 2973) currently in compliance with the License Article 405 *State Historic Preservation Office Consultation*?

☑ Yes ☐ No

☐ N/A or Unknown. If N/A or Unknown please explain:

If you have any additional comments, please provide them here:

SHPO provided a "no effect" finding on 12/9/85 for the FERC license
Fall River Rural Electric or FERC should have these on file (ours are archived
US Forest Service was also consulted. not easily accessible)

Please return this Questionnaire to Laura Cowan by email at
within 15 days of receipt.

APPENDIX J

RECREATION

UNITED STATES OF AMERICA 60 FERC 62,218
FEDERAL ENERGY REGULATORY COMMISSION

Fall River Rural Electric Cooperative, Inc. — Project No. 2973-035 Idaho

ORDER APPROVING REVISED REPORT ON RECREATIONAL RESOURCES WITH MODIFICATION

(Issued September 18, 1992)

On August 19, 1992, Ecosystem Research Institute, Inc., on behalf of the Fall River Rural Electric Cooperative, Inc. (licensee), filed a revised report on recreation resources, as required by article 133 of the license for the Island Park Project.

Article 133 requires the licensee, after consultation with various resource agencies, to prepare and file for Commission approval a revised report on recreational resources. The report is to conform to the Commission's regulations and include provisions for the development of specific recreation facilities. Further, the report is to include consideration of handicapped individuals, a drawing showing the type and location of facilities to be provided at the project, a construction schedule, an operation and maintenance schedule or agreement, and documentation of consultation with the required resource agencies.

Licensee's Proposed Report

In its report, the licensee proposes to make improvements and additions to the project's Box Canyon boat launch site. Specifically, the licensee proposes to reconstruct the existing parking area, improve the existing access road and boat launch, and install restroom facilities, a fishing platform, informative/interpretive signs, and a trail at the site. Further, the report includes a drawing showing the type and location of the facilities to be provided at the site, a statement of intent to develop an operation and maintenance agreement with the U.S. Forest Service (USFS), and documentation of consultation with the required agencies.

Agency Comments

By letter dated August 6, 1992, the Idaho Department of Parks and Recreation (IDPR) concurred with the licensee's proposed development plans and recommended that the proposed facilities comply with the standards of the Americans with Disabilities Act (ADA). Further, the IDPR provided comments on the Brimstone cross-country ski trail, located near the project and anticipated to require partial relocation as a result of project construction and operation.

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The licensee's proposed report identifies the Brimstone cross-country ski trail as an existing winter recreation facility near the project. Article 407 requires the licensee, after consultation with specific resource agencies, including the IDPR, to replace and maintain portions of Brimstone cross-country ski trail disturbed by project construction or operation and to file as-built drawings of the completed trail; as such, the IDPR's comments regarding the Brimstone ski trail will be addressed under a separate proceeding. Regarding access for the disabled, the licensee's report adequately takes into consideration the needs of the physically handicapped as required by article 133 and section 2.7 of the Commission's regulations.

By letter dated September 9, 1992, the USFS stated that it approves the report subject to certain conditions. Specifically, the USFS states that it no longer sees a need to place concrete planks on the area's boat ramp below the high water line (unless other Federal or state agencies determine that there is a need for such an improvement), and recommends that the turn-around area and handicapped parking space near the boat launch ramp be surfaced with concrete or asphalt. Further, the USFS states that it will assume the responsibility for operation/maintenance of the proposed recreation facilities. The licensee has reported to staff that it concurs with the changes made by the USFS in its September 9, 1992 letter.

By letter dated August 14, 1992, the National Park Service (NPS) provided comments on the proposed report. Specifically, the NPS questions whether the parking area at the site is large enough to accommodate an expected 10% increase in use in the next decade and recommends that the parking area be designed to accommodate a greater number of cars and trailers. Further, the NPS requests the licensee address, with the USFS, the safety of handicapped individuals who use the boat launch access road.

In its filing, the licensee states that the parking area will remain at its present size (approx. 10,048 square feet) to minimize impacts on undisturbed areas. The parking area will be leveled and well defined, although specific parking locations will not be delineated. Further, the licensee states that the handicapped parking space planned for the parking area will be located outside and adjacent to the boundaries of the parking area and that the availability of parking will vary daily based upon the number of users and the types of vehicles, but is expected to accommodate 12-15 vehicles. In addition, the licensee states that a handicapped parking space will be provided near the river to provide access to the boat launch and fishing platform. For this reason, handicapped individuals will not have to use the boat launch access road to access the boat launch and fishing platform.

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Discussion

The NPS states that the parking area at the site may not be large enough to accommodate an expected 10% increase in use in the next decade. Articles 104 and 17 of the license relate to the oversight of project area and operations to ensure that the project's recreational values are adequately maintained and developed throughout the term of the license1. In this regard, the reserved authority contained in articles 104 and 17 will permit the Commission to ensure the adequacy of the facilities over the license term.

On August 21, 1992, the licensee filed a construction schedule for the project to ensure that all construction activities would avoid the peak recreation season, as required under article 406. This schedule stipulates that the proposed recreation facilities will be constructed between September 1992 and May 1993. The proposed recreation facilities will be made available to the public in May 1993. The licensee's proposed construction schedule for the recreation facilities is reasonable.

Conclusion

Implementation of the filed report, as modified by this order, meets the requirements of article 133 and would protect and enhance the public recreational opportunities of the project area. The environmental impacts of the licensee's proposal are expected to be minor and short term.

1 Article 104 of the license requires the licensee to consult annually with the USFS regarding measures needed to ensure the protection and development of the natural resource values of the project area. The Commission reserves the right, after notice and opportunity for hearing, to require changes in the project that may be necessary to accomplish natural resource protection.

Article 17 requires the licensee to construct, maintain, and operate reasonable recreational facilities, including modifications thereto, as may be prescribed by the Commission during the term of the license, upon its own motion or upon the recommendation of interested Federal or State agencies, after notice and opportunity for hearing.

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Order approving revised recreation report

The Director orders:

(A) The revised report on recreation resources filed August 19, 1992, as modified by paragraphs (B), (C) and (D), is approved.

(B) The approved report is modified to reflect the following changes, as stipulated in the USFS letter dated September 9, 1992:

* Volume 1. Section 4.2.4 - Concrete planks are not required on the boat launch ramp below the high water line.

* Volume 1. Section 4.2.5 - The turn-around area and handicapped parking space near the boat launch ramp will be surfaced with concrete or asphalt as planned for the boat launch access road.

(C) Within 90 days from the date of completion of the proposed facilities, the licensee shall file as-built drawings showing the type and location of the completed facilities. The proposed facilities shall be completed no later than May 31, 1993.

(D) The schedule for constructing the recreation facilities by May 1993, filed August 21, 1992, is approved.

(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 C.F.R. ⊥ 385.713.

J. Mark Robinson
Director, Division of Project
Compliance and Administration

♀

UNITED STATES OF AMERICA 69 FERC ¶62,100
FEDERAL ENERGY REGULATORY COMMISSION

Island Park Hydro L.L.C. Project No. 2973-055
Idaho

ORDER APPROVING RECREATION AS-BUILT DRAWING
(Issued November 3, 1994)

On January 24, 1994, Island Park Hydro L.L.C. (licensee) filed with the Commission as-built recreation drawings for the Island Park Project, FERC No. 2973. The recreation as-built drawings were required by ordering paragraph (C) of the Commission's order dated September 18, 1992.1

The material filed on January 24, 1994 included as-built drawings of the project's recreation features and the vault-frame comfort station implemented at the project. The drawings of the comfort station were not required by paragraph (C) and were not reviewed by Commission staff. The drawing of the project's recreation features, however, was required by paragraph (C) and was reviewed. Because the Commission staff found the drawing did not adequately show the features approved by the Commission's September 18, 1992 order, a letter was issued on August 8, 1994 requesting revisions to the drawing. In addition, this letter requested supplemental information about the previously approved interpretive/informative sign locations and text.

The required supplemental information was filed with the Commission on October 11, 1994. The supplemental filing consists of a revised recreation features drawing, a drawing of the sign welcoming visitors to the project, and the text of the interpretive sign near the fishing platform. As submitted, the supplemental material meets the requirements of ordering paragraph (C) and the Commission's supplemental information request letter. The material filed on October 11, 1994 should be approved and an aperture card of the revised recreation features drawing (only) should be filed with the Commission as a part of the project license.

During our review of exhibit drawings, a discrepancy was noticed in the Island Park Project's record of exhibit drawings. On March 14, 1994, the Commission issued an Order Approving As-Built Exhibit F Drawings.2 In the order, FERC drawing numbers 2973-15 through 2973-19 were issued for exhibits F-7 through F-11. The drawing numbers for these exhibits should have

1 See Order Approving Revised Report of Recreational Resources With Modification, 60 FERC ¶ 62,218 (1992).

2 See 66 FERC ¶ 62,149 (1994).

♀

been FERC drawing numbers 2973-20 through 2973-24. This order will approve the revised recreation features drawing as exhibit R-1, and will correct the discrepancy in the exhibit F drawing numbers, by specifying the appropriate FERC drawing numbers.

The Director orders:

(A) The as-built drawings filed on October 11, 1994, are approved. The revised recreation features drawing is made part of the license and is approved under the following FERC drawing number.

Exhibit	FERC No.	Showing
R-1	2973-25	Recreation Features

(B) Within 90 days of the date of issuance of this order, the licensee shall file an original and two duplicate aperture cards of the approved drawing. The original should be reproduced on silver or gelatin 35mm microfilm. The duplicates are copies of the original made on Diazo-type microfilm. All microfilm should be mounted on Type D (3 1/4" x 7 3/8") aperture cards.

Prior to microfilming, the FERC Drawing Number (2973-25) shall be shown in the margin below the title block of the approved drawing. After mounting, the FERC Drawing Number should be typed on the upper right corner of each aperture card. Additionally, the Project Number, FERC Exhibit (R-1), Drawing Title, and the date of this order should be typed on the upper left corner of each aperture card.

The original and one duplicate set of aperture cards should be filed with the Secretary of the Commission. The remaining duplicate set of aperture cards should be filed with the Commission's Portland Regional Office.

(C) The following FERC drawing numbers are corrected and now appear as follows in the Island Park Project's record of exhibit drawings:

Exhibit	Drawing No. Approved By Order Issued on 3/14/94	Correct Drawing No.
F-7	2973-15	2973-20
F-8	2973-16	2973-21
F-9	2973-17	2973-22
F-10	2973-18	2973-23
F-11	2973-19	2973-24

♀

(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.

J. Mark Robinson
Director, Division of Project
Compliance and Administration

♀

Date Received: 8/31/2015

Island Park Hydroelectric Project (FERC No. 2973)

Low Impact Hydroelectric Power Facility Certification

1. Contact Information for person completing the questionnaire:

Name & Title:	Adam Straubinger, Park Planner
Organization:	**Idaho Department of Parks and Recreation**
Address:	5657 Warm Springs Ave
	Boise, ID 83716
Phone:	(208) 514-2457
Email:	adam.straubinger@idpr.idaho.gov

2. To the best of your knowledge, is the Island Park Hydroelectric Project (FERC License No. 2973) License Articles 105 and 133 *Recreation Plan* still valid?

☒ Yes ☐ No

☐ N/A or Unknown. If N/A or Unknown please explain:

2(a) Is the Island Park Hydroelectric Project (FERC Project No. 2973) currently in compliance with the License Articles 105 and 133 *Recreation Plan*?

☒ Yes ☐ No

☐ N/A or Unknown. If N/A or Unknown please explain:

If you have any additional comments, please provide them here: A letter dated 01/23/2014 was sent from FERC to Brent Smith (Northwest Power Services, Inc.) regarding the completion of Form 80 by April 1, 2015 for the Island Park Hyrdroelectric Project. After reviewing all documents in the FERC eLibrary for this project, it appears that Form 80 either was not submitted or has not been added to the eLibrary. Form 80 gathers and reports on recreational use data at the project site.

Please return this Questionnaire to Laura Cowan by email at Laura.Cowan@KleinschmidtGroup.com within 15 days of receipt.

From:	Bingman, Mark -FS
To:	Katie Sellers
Cc:	Davy, Elizabeth -FS; Laura Cowan
Subject:	RE: Review of Island Park Hydro Information for Low Impact Hydropower Institute
Date:	Friday, November 18, 2016 2:26:54 PM
Attachments:	image007.png image008.png image009.png image010.png image011.png image012.png image013.png image014.png image015.png image016.png image017.png image018.png

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Hello Katie,

The Island Park Hydroelectric Project (FERC #2973) was inspected by Forest personnel on September 26, 2016. The facilities were found to be operating in compliance with Article 105 (Report on Recreational Resources) and Article 133 (Recreation Plan) of the FERC license. This inspection fulfilled the annual review of the facilities and their operation as specified in the Forest Service Manual, Section 2720.

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

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46 Highway 20
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www.fs.fed.us

Caring for the land and serving people

From: Katie Sellers [mailto:Katie.Sellers@KleinschmidtGroup.com]
Sent: Friday, November 18, 2016 5:28 AM
To: Davy, Elizabeth -FS <edavy@fs.fed.us>; Bingman, Mark -FS <mbingman@fs.fed.us>
Cc: Laura Cowan <Laura.Cowan@KleinschmidtGroup.com>
Subject: RE: Review of Island Park Hydro Information for Low Impact Hydropower Institute

Hi Liz – Email correspondence is perfect. Thanks for checking!
Katie

Katie Sellers

Regulatory Coordinator
Kleinschmidt
Office: 207-416-1218
www.KleinschmidtGroup.com

From: Davy, Elizabeth -FS [mailto:edavy@fs.fed.us]
Sent: Thursday, November 17, 2016 6:41 PM
To: Katie Sellers <Katie.Sellers@KleinschmidtGroup.com>; Bingman, Mark -FS <mbingman@fs.fed.us>
Cc: Laura Cowan <Laura.Cowan@KleinschmidtGroup.com>
Subject: RE: Review of Island Park Hydro Information for Low Impact Hydropower Institute

Katie do you want a letter? Or will email correspondence suffice?

Liz Davy
District Ranger

Forest Service
Caribou-Targhee National Forest, Ashton/Island Park Ranger District

p: 208-652-1203
c: 208-313-7758
f: 208-652-7863
edavy@fs.fed.us

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: Thursday, November 17, 2016 2:56 PM
To: Davy, Elizabeth -FS <edavy@fs.fed.us>; Bingman, Mark -FS <mbingman@fs.fed.us>
Cc: Laura Cowan <Laura.Cowan@KleinschmidtGroup.com>
Subject: Review of Island Park Hydro Information for Low Impact Hydropower Institute

Hi Mark and Elizabeth ,
Kleinschmidt is helping Fall River Rural Electric Cooperative with applying for a Low Impact Hydropower Institute (LIHI) Certification for the Island Park Hydroelectric Project (FERC No. 2973). LIHI has reviewed the draft Island Park application submission and requests the following input be provided from USFS prior to final application submission:

- Confirm the Project is operating in compliance with License Article 105 (Report on Recreational Resources) and Article 133 (Recreation Plan).

If you could please provide feedback on the above topics at your earliest convenience, it would be much appreciated.

Thank you!
Katie Sellers

Katie Sellers
Regulatory Coordinator
Kleinschmidt
Office: 207-416-1218
www.KleinschmidtGroup.com

From:	Wade Vagias
To:	Katie Sellers; Susan Rosebrough
Cc:	Laura Cowan; Mark Chandler
Subject:	RE: Review of Island Park Hydro Information for Low Impact Hydropower Institute
Date:	Tuesday, December 20, 2016 3:55:31 PM
Attachments:	image006.png

Katie:
Craters of the Moon, National Park Service, has reviewed the requested LIHI Project (FERC 2973) and believes the project is in compliance with FERC License Articles 105 and 133 . Please contact Susan Rosebrough, NPS Hydropower Assistance Program, at (206) 220-4121 if you have any questions. Thank you (and sorry for the delay!). -wade

~*~*~*~*~*~*~*~*~*~*~*~

Wade M. Vagias, Ph.D.
Superintendent
Craters of the Moon National Monument & Preserve
(208) 527-1310 (office)
(406) 581-1367 (cell)

2016 National Park Service CENTENNIAL | FIND YOUR PARK

From: Katie Sellers [mailto:Katie.Sellers@KleinschmidtGroup.com]
Sent: Thursday, December 15, 2016 11:24 AM
To: Rosebrough, Susan
Cc: Wade Vagias; Laura Cowan; Mark Chandler
Subject: RE: Review of Island Park Hydro Information for Low Impact Hydropower Institute

Hi Susan,

All good questions.

-This application is being considered for a new certification. Although this facility was once certified in 2001, the certification was revoked in 2001 due to drought conditions and difficulties with providing minimum flows downstream from the USBR controlled dam. There has been no certification in place since then.

-Indeed this is the application format based on the pre-2016 criteria. This application process started in 2015 and LIHI has “grandfathered” this application such that it may stay in the same format it was started. That said, these grandfathered applications are due by 12/31/2016.

-The USFS did weigh in on this application and they have reported that the project is operating in compliance with Article 105 and Article 133 (email attached).

-Form 80 – no data was previously collected, but, Fall River started keeping track of recreational

visitors in 2015. The 2016 Form 80 for Island Park is attached.

Do let me know if you have any follow-up questions.

Best,

Katie

Katie Sellers
Regulatory Coordinator
Kleinschmidt
Office: 207-416-1218
www.KleinschmidtGroup.com

From: Rosebrough, Susan [mailto:susan_rosebrough@nps.gov]
Sent: Tuesday, December 13, 2016 12:25 PM
To: Katie Sellers <Katie.Sellers@KleinschmidtGroup.com>
Cc: Wade Vagias <wade_vagias@nps.gov>; Laura Cowan <Laura.Cowan@KleinschmidtGroup.com>
Subject: Re: Review of Island Park Hydro Information for Low Impact Hydropower Institute

Hi Katie -

Thanks for the quick reply and materials, they are very helpful. A couple of follow-up questions.

Is this application for re-certification or certification? I thought Island Park had been certified before?

Also, it looks like criteria being used is the pre-2016 criteria, is that right, and could you say why that is? Is it because the application process started before 2016?

I see IDPR question/comment regarding form 80, what was the resolution there? And has the USFS weighed in on the application yet?

I just did a quick review of the application this morning, and I apologize if I missed any of the answers to these questions in the materials you sent.

Thanks,
Susan

On Tue, Dec 13, 2016 at 8:42 AM, Katie Sellers <Katie.Sellers@kleinschmidtgroup.com> wrote:

> This message contains attachments delivered via ShareFile.
>
> - 001 Island Park Application Long Form 9_25_2015.pdf (16.4 MB)
>
> Download the attachments by clicking here.

Hi Wade and Susan, Thank you for looking into this. Below you will find the referenced license articles in question and attached you will find the Project License. I am also unable to access the recreation report but have attached FERC's approval of the Recreation Report (which summarizes the report and talks about the agency consultation). I have also attached via ShareFile the initial LIHI Application that was submitted to LIHI. We are working on pulling together the revised application (with agency feedback included) now, but this attached version will give you text on the Project's Recreation compliance as we have evaluated it (pg 22) . To access the ShareFile document, click on the "Clicking Here" link, fill in your name and organization name, and then you will be able to download/save the document (no passwords required).

Do let me know if you have any follow-up questions or information needs.

Thanks again
Katie

License Article 105: Within 1 year following the date of issuance of this license and before starting any activities the Forest Service determines to be of a land-disturbing nature on National Forest System land, the Licensee shall file with the Director, Office of Hydropower Licensing, a plan approved by the Forest Service for accommodation of project-included recreation. The Licensee shall not commence activities the Forest Service determines to be affected by the plan until after 60 days following the filing date, unless the Director, Office of Hydropower Licensing, prescribes a different commencement schedule.

License Article 133: Licensee shall, after consultation with the National Park Service, the U.S. Forest Service, the Bureau of Reclamation and the Idaho Department of Parks and Recreation, prepare and file with the Commission for approval, within 18 months from the date of issuance of this license, a revised Report on Recreational Resources that conforms to the requirements of Commission Regulations, 18 CFR at 4.41(f)(7). The report shall include, but not be limited to, provisions for development of improved access to the Project lands and waters, parking and toilet facilities, including consideration of facilities for the handicapped. Further, the filing shall include a drawing showing the type and location of the facilities to be provided at the Project, a construction schedule, an operation and maintenance schedule and/or agreement, and documentation of consultation with the above named agencies.

Katie Sellers
Regulatory Coordinator
Kleinschmidt
Office: 207-416-1218
www.KleinschmidtGroup.com

From: Wade Vagias [mailto:wade_vagias@nps.gov]
Sent: Tuesday, December 13, 2016 10:18 AM
To: Katie Sellers <Katie.Sellers@KleinschmidtGroup.com>
Cc: Susan Rosebrough <susan_rosebrough@nps.gov>

Subject: RE: Review of Island Park Hydro Information for Low Impact Hydropower Institute

Katie: Do you have a copy of the low impact hydro application, license articles in question, or recreation plan? Susan Rosebrough, who works in the NPS Hydro Assistance Program, was unable to locate in the FERC e-library. Thanks. -wade

---

From: Katie Sellers [mailto:Katie.Sellers@KleinschmidtGroup.com]
Sent: Wednesday, November 30, 2016 9:45 AM
To: Wade Vagias
Subject: RE: Review of Island Park Hydro Information for Low Impact Hydropower Institute

Hi Wade, No worries. I am helping Fall River Rural Electric Cooperative with applying for a Low Impact Hydropower Institute (LIHI) Re-Certification for the Island Park Hydroelectric Project (FERC No. 2973). LIHI has reviewed the draft Island Park application submission and has requested that NPS review the project records to confirm the Project is operating in compliance with FERC License Article 105 (Report on Recreational Resources) and FERC License Article 133 (Recreation Plan).
Let me know if there is any more info I can help provide for a review of compliance with Article 105 and 133.
Thank you!
Katie

Katie Sellers
Regulatory Coordinator
Kleinschmidt
Office: 207-416-1218
www.KleinschmidtGroup.com

From: Wade Vagias [mailto:wade_vagias@nps.gov]
Sent: Tuesday, November 29, 2016 8:44 PM
To: Katie Sellers <Katie.Sellers@KleinschmidtGroup.com>
Subject: Re: Review of Island Park Hydro Information for Low Impact Hydropower Institute

Katie-
I'm sorry, what exactly do you need from me/Craters of the Moon? I'm on travel and have been out of the office -wade

~*~

Wade M. Vagias, Ph.D.
Superintendent
Craters of the Moon National Monument and Preserve
(208) 527-1310 (office)
(406) 581-1367 (cell)
(sent from my iPad)

On Nov 29, 2016, at 2:03 PM, Katie Sellers <Katie.Sellers@kleinschmidtgroup.com> wrote:

> Afternoon Wade,
>
> Just following-up on the below compliance review for Island Park.
>
> Do let me know if you have any questions.
>
> Best,
> Katie
>
> **Katie Sellers**
> **Regulatory Coordinator**
> **<image001.gif>**
> **Office: 207-416-1218**
> **www.KleinschmidtGroup.com**
> <image002.png>
>
> **From:** Katie Sellers
> **Sent:** Thursday, November 17, 2016 5:35 PM
> **To:** 'Buckley, Daniel' <dan_buckley@nps.gov>; Wade Vagias <wade_vagias@nps.gov>

Subject: RE: Review of Island Park Hydro Information for Low Impact Hydropower Institute

Thank you Dan for passing this on to Wade.

Best
Katie

Katie Sellers
Regulatory Coordinator
<image001.gif>
Office: 207-416-1218
www.KleinschmidtGroup.com
<image002.png>

From: Buckley, Daniel [mailto:dan_buckley@nps.gov]
Sent: Thursday, November 17, 2016 5:29 PM
To: Wade Vagias <wade_vagias@nps.gov>
Cc: Katie Sellers <Katie.Sellers@KleinschmidtGroup.com>
Subject: Fwd: Review of Island Park Hydro Information for Low Impact Hydropower Institute

Wade, FYI.

Katie Sellers, I am no longer the Park Superintendent at Craters of the Moon. As of last December, Wade Vagias is now the Craters of the Moon NM & P Superintendent. Thanks.

---------- Forwarded message ----------
From: **Katie Sellers** <Katie.Sellers@kleinschmidtgroup.com>
Date: Thu, Nov 17, 2016 at 3:24 PM
Subject: Review of Island Park Hydro Information for Low Impact Hydropower Institute
To: "dan_buckley@nps.gov" <dan_buckley@nps.gov>
Cc: Laura Cowan <Laura.Cowan@kleinschmidtgroup.com>, "dan_wenk@nps.gov" <dan_wenk@nps.gov>

Dear Dan and Dan,
Kleinschmidt is helping Fall River Rural Electric Cooperative with applying for a Low Impact Hydropower Institute (LIHI) Certification for the Island Park Hydroelectric Project (FERC No. 2973) located in Idaho. LIHI has reviewed the draft Island Park application submission and requests the following input be provided from NPS prior to final application submission:

- Confirm the Project is operating in compliance with FERC License Article 105 (Report on Recreational Resources) and FERC License

Article 133 (Recreation Plan).

If you (or another appropriate contact) could please provide feedback on the above topic at your earliest convenience, it would be much appreciated. Please let me know if you have any questions.

Thank you!
Katie Sellers

Katie Sellers
Regulatory Coordinator
<image001.gif>
Office: 207-416-1218
www.KleinschmidtGroup.com
<image002.png>

--
Dan Buckley
NPS Branch Chief of Wildland Fire
3833 S. Development Ave
Boise, ID 83705

(208) 387-5225 (office)
(208) 484-5161 (cell)
(208) 387-5250 (fax)

--
Susan Rosebrough
National Park Service
Rivers, Trails & Conservation Assistance Program (RTCA)
Hydropower Assistance Program

Office: 206.220.4121
Cell: 206.851.1657

susan_rosebrough@nps.gov
909 1st Ave
Seattle, WA 98104
www.nps.gov/rtca

Find us on Facebook

Federal Energy Regulatory Commission (FERC)
FERC Form 80

Licensed Hydropower Development Recreation Report

Form Approved
OMB No. 1902-0106
Expires: 09/30/2016
Burden 3.0 hours

General Information:
This form collects data on recreation amenities at projects licensed by FERC under the Federal Power Act (16 USC 791a-825r). This form must be submitted by licensees of all projects except those specifically exempted under 18 CFR 8.11 (c). For regular, periodic filings, submit this form on or before April 1, 2015. Submit subsequent filings of this form on or before April 1, every 6th year thereafter (for example, 2021, 2027, etc.). For initial Form No. 80 filings (18CFR 8.11(b)), each licensee of an unconstructed project shall file an initial Form No. 80 after such project has been in operation for a full calendar year prior to the filing deadline. Each licensee of an existing (constructed) project shall file an initial Form No. 80 after such project has been licensed for a full calendar year prior to the filing deadline. Filing electronically is preferred. (See http://www.ferc.gov for more information.) If you cannot file electronically, submit an original and two copies of the form to the: Federal Energy Regulatory Commission, Office of the Secretary, 888 First St., NE, Washington, DC 20426.

The public burden estimated for this form is three hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing the collection of information. Send comments regarding the burden estimate or any aspect of this collection of information, including suggestions for reducing burden, to: FERC via e-mail DataClearance@ferc.gov; or mail to 888 First Street NE, Washington, DC 20426 (Attention: Information Clearance Officer) and Office of Management and Budget (OMB), via e-mail to oira_submission@omb.eop.gov; or mail to OMB, Office of Information and Regulatory Affairs, Attention: Desk Officer for FERC, Washington, DC 20503. Include OMB Control Number 1902-0106 as a point of reference. No person shall be subject to any penalty for failing to comply with a collection of information if the collection of information does not display a valid control number (44 U.S.C. § 3512 (a)).

Instructions:
a. All data reported on this form must represent publicly available recreation amenities and services located within the project boundary.
b. To ensure a common understanding of terms, please refer to the Glossary on page 3.
c. Report actual data for each item. If actual data are unavailable, then please estimate.
d. Submit a completed form for each development at your project.

Schedule 1. General Data

1. Licensee Name: Fall River Rural Electric Cooperative Inc.
2. Project Name: Island Park Hydro Project
3. Project Number: 2973
4. Development Name: N/A

Complete the following for each development if more than one.

8. Reservoir Surface Area at Normal Pool (acres): N/A
9. Shoreline Miles at Normal Pool: N/A
10. Percent of Shoreline Available for Public Use: N/A

States Development/Project Traverses (List state with largest area within the development/project boundary first):

5. State #1: ID
6. State #2: _____

7. Type of Project License: (check one) Major X / Minor _____

11. Data Collection Methods (enter percent for each method used; total must equal 100%):

_____ traffic count/trail count
_____ attendance records
100% staff observation (daily count of parked vehicles)
_____ visitor counts or surveys
_____ estimate (explain)

For 2014, enter only the licensee's annual recreational construction, operation, and maintenance costs for the development (project). Also, enter the annual recreational revenues for that year.

Item	Licensee's Annual Recreation Costs and Revenues (In Whole Dollars)	
	Construction, Operation and Maintenance Costs	Recreation Revenues for Calendar Year
12. Dollar Values	-0-	-0-

13. Length of Recreation Season: Summer: From (MM/DD) 4/1 To 11/30 Winter: From (MM/DD) N/A To N/A

Period	Number of visits to all recreational areas at development/project (in Recreation Days)	
	Annual Total	Peak Weekend Average (see Glossary)
14. Daytime	2269	78
15. Nighttime	N/A	N/A

Respondent Certification: The undersigned certifies that he/she examined this report; and to the best of his/her knowledge, all data provided herein are true, complete, and accurate.

Legal Name	Title	Area Code/Phone No.
Signature	Date Signed	Reporting Year Ending

Title 18 U.S.C.1001 makes it a crime for any person knowingly and willingly to make to any Agency or department of the United States any false, fictitious or fraudulent statement or misrepresentation as to any matter within its jurisdiction.

Licensed Hydropower Development Recreation Report

Schedule 2. Inventory of Publicly Available Recreation Amenities Within the Project Boundary

16. Enter data for each Recreation Amenity Type (a). For User Free (b) and User Fee (c) enter the number of publicly available recreation amenities, located within the project boundary, regardless of provider. For FERC Approved (d) enter the number of amenities identified under User Free (b) and User Fee (c) for which the licensee has an ongoing responsibility for funding or maintenance (see Glossary for further detail). For Capacity Utilization(f), of the total publicly available amenities (b) + (c), compare the average non-peak weekend use (see Glossary) for each recreation amenity type (during the recreation season, with the highest use, reported on Schedule 1, Item 13) with the total combined capacity of each amenity type and enter a percentage that indicates their overall level of use. For example, if all public boat launches are used to half capacity during the non-peak weekend days, enter 50% (should use exceed capacity for an amenity type, enter the appropriate percentage above 100).

Recreation Amenity Type (a)	Number of Recreation Amenities			Total Units (e)	Capacity Utilization (%) (f)
	User Free (b)	User Fee (c)	FERC Approved (d)		
Boat Launch Areas. Improved areas having one or more boat launch lanes (enter number in column e) and are usually marked with signs, have hardened surfaces, and typically have adjacent parking.	1			1 Lanes	50%
Marinas. Facilities with more than 10 slips on project waters, which include one or more of the following: docking, fueling, repair and storage of boats; boat/equipment rental; or sell bait/food (see Glossary FERC approved).				N/A	
Whitewater Boating. Put-ins/Take-outs specifically designated for whitewater access.				N/A	
Portages. Sites designed for launching and taking out canoes/kayaks and the improved, designated, and maintained trails connecting such sites (enter length of trail in column e).				Feet	
Tailwater Fishing. Platforms, walkways, or similar structures to facilitate below dam fishing.	1			N/A	20%
Reservoir Fishing. Platforms, walkways, or similar structures to facilitate fishing in the reservoir pool or feeder streams.				N/A	
Swim Areas. Sites providing swimming facilities (bath houses, designated swim areas, parking and sanitation facilities).				Acres	
Trails. Narrow tracks used for non-automobile recreation travel which are mapped and designated for specific use(s) such as hiking, biking, horseback riding, snowmobiling, or XC skiing (excludes portages, paths or accessible routes; See Glossary).	1			Miles	20%
Active Recreation Areas. Playground equipment, game courts/fields, golf/disc golf courses, jogging tracks, etc.				Acres	
Picnic Areas. Locations containing one or more picnic sites (each of which may include tables, grills, trash cans, and parking).				Sites	
Overlooks/Vistas. Sites established to view scenery, wildlife, cultural resources, project features, or landscapes.				Acres	
Visitor Centers. Buildings where the public can gather information about the development/project, its operation, nearby historic, natural, cultural, recreational resources, and other items of interest.				N/A	
Interpretive Displays. Signage/Kiosks/Billboards which provide information about the development/project, its operation, nearby historic, natural, cultural, recreational resources, and other items of interest.	1			N/A	N/A
Hunting Areas. Lands open to the general public for hunting.				Acres	
Winter Areas. Locations providing opportunities for skiing, sledding, curling, ice skating, or other winter activities.				Acres	
Campgrounds. Hardened areas developed to cluster campers (may include sites for tents, trailers, recreational vehicles [RV], yurts, cabins, or a combination, but excludes group camps).				Acres	N/A
Campsites. Sites for tents, trailers, recreational vehicles [RV], yurts, cabins, or a combination of temporary uses.				N/A	
Cottage Sites. Permanent, all-weather, buildings rented for short-term use, by the public, for recreational purposes.				N/A	
Group Camps. Areas equipped to accommodate large groups of campers that are open to the general public (may be operated by public, private, or non-profit organizations).				Sites	
Dispersed Camping Areas. Places visitors are allowed to camp outside of a developed campground (enter number of sites in clmn. e).				Sites	
Informal Use Areas. Well used locations which typically do not include amenities, but require operation and maintenance and/or public safety responsibilities					
Access Points. Well-used sites (not accounted for elsewhere on this form) for visitors entering project lands or waters, without trespassing, for recreational purposes (may have limited development such as parking, restrooms, signage).				N/A	
Other. Amenities that do not fit in the categories identified above. Please specify (if more than one, separate by commas):					

Glossary of FERC Form 80 Terms

Data Collection Methods. (Schedule 1, Item 11) – If a percentage is entered for the estimate alternative, please provide an explanation of the methods used (if submitted on a separate piece of paper, please include licensee name, project number, and development name)

Development. The portion of a project which includes:
(a) a reservoir; or
(b) a generating station and its specifically-related waterways.

Exemption from Filing. Exemption from the filing of this form granted upon Commission approval of an application by a licensee pursuant to the provisions of 18 CFR 8.11(c).

General Public. Those persons who do not have special privileges to use the shoreline for recreational purposes, such as waterfront property ownership, water-privileged community rights, or renters with such privileges.

Licensee. Any person, state, or municipality licensed under the provisions of Section 4 of the Federal Power Act, and any assignee or successor in interest. For the purposes of this form, the terms licensee, owner, and respondent are interchangeable *except where:*
(a) the *owner* or licensee is a subsidiary of a parent company which has been or is required to file this form; or
(b) there is more than one owner or licensee, of whom only one is responsible for filing this form. Enter the name of the entity that is responsible for filing this report in Schedule 1, Item 2.1.

Major License. A license for a project of more than 1,500 kilowatts installed capacity.

Minor License. A license for a project of 1,500 kilowatts or less installed capacity.

Non-Peak Weekend. Any weekend that is not a holiday and thus reflects more typical use during the recreation season.

Number of Recreation Amenities. Quantifies the availability of natural or man-made property or facilities for a given recreation amenity type. This includes all recreation resources available to the public within the development/project boundary. The resources are broken into the following categories:

User Free (Schedule 2, column b) - Those amenities within the development/project that are free to the public;

User Fee (Schedule 2, column c) - Those amenities within the development/project where the licensee/facility operator charges a fee;

FERC Approved (Schedule 2, column d) – Those amenities within the development/project required by the Commission in a license or license amendment document, including an approved recreation plan or report. Recreation amenities that are within the project boundary, but were approved by the licensee through the standard land use article or by the Commission through an application for non-project use of project lands and waters, are typically not counted as FERC approved, unless they are available to the public, but may be counted as either user free or user fee resources. The total FERC approved amenities column does not necessarily have to equal the sum of user free and user fee amenities.

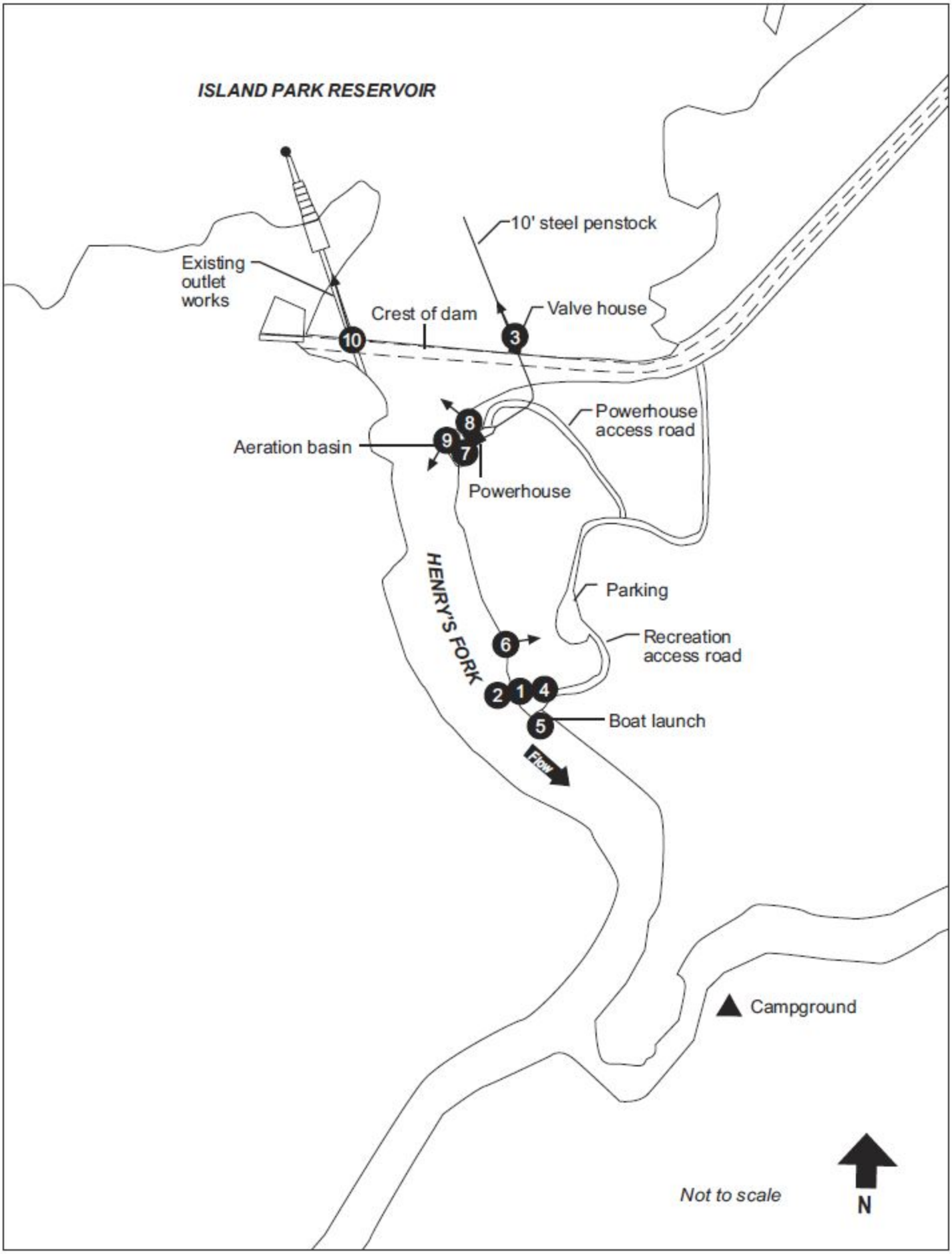
Peak Use Weekend. Weekends when recreational use is at its peak for the season (typically Memorial Day, July 4th & Labor Day). On these weekends, recreational use may exceed the capacity of the area to handle such use. Include use for all three days in the holiday weekends when calculating Peak Weekend Average for items 14 & 15 on Schedule 1.

Recreation Day. Each visit by a person to a development (as defined above) for recreational purposes during any portion of a 24-hour period.

Revenues. Income generated from recreation amenities at a given project/development during the previous calendar year. Includes fees for access or use of area.

Total Units (Schedule 2, column e) – Provide the total length, or area, or number that is appropriate for each amenity type using the metric provided.

Trails. Narrow tracks used for non-automobile recreation travel which are mapped and designated for specific use(s) such as hiking, biking, horseback riding, snowmobiling, or XC skiing. Trails are recreation amenities which provide the opportunity to engage in recreational pursuits, unlike paths (means of egress whose primary purpose is linking recreation amenities at a facility) or accessible routes (means of egress which meets the needs of persons with disability and links accessible recreation amenities and infrastructure at a facility).



P-2973 Island Park


World • United States • ID • Fremont Co.
Redtail St
Redtail St
Island Park Hydroelectric Project
Trail
Box Canyon Boat Launch
Parking Lot
Box Canyon Boat Launch
250 feet
50 m
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EXHIBIT A

PROJECT CONTACT INFORMATION FORM

PROJECT CONTACT FORM

Project Name: **Island Park Hydroelectric Project** FERC No. **P-2973**

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

12-22-16

Date