REVIEW OF APPLICATION FOR RE-CERTIFICATION BY THE LOW IMPACT HYDROPOWER INSTITUTE OF THE ISLAND PARK HYDROELECTRIC FACILITY, LIHI #2

Prepared by Patricia McIlvaine
April 11, 2022

I. INTRODUCTION

This report[1] reviews the recertification application submitted for the 4.8-MW Island Park Hydropower Project (P-2973) (the "Project"), LIHI #2, which is owned by Fall River Rural Electric Cooperative, Inc. (FRREC or "Applicant") and operates in a run-of-release mode. The Island Park Hydroelectric Project is located at the U.S. Bureau of Reclamation (USBR) Island Park Dam, about 39 miles north of Ashton, in Fremont County, Idaho.

This is the first review of the Project under the 2nd Edition of the Handbook. The Project was first certified by LIHI in June 2001 for a 5-year period, but the certification was temporarily suspended in December 2001 as required flow releases could not be met due to drought conditions. The certification was reinstated in 2005 and subsequent recertifications were granted in 2006 and 2017 (the Applicant chose not to recertify in 2011). The current certification was effective December 30, 2016 through December 30, 2021, but was extended to April 30, 2022.

The current certification included the following condition:

> **Condition 1.** *In its annual compliance report, the Owner shall report on any FERC Order or FERC correspondence in response to the Owner Agent's notice to FERC dated December 13, 2017 regarding the status of License Article 401 and dissolved oxygen measurements. The Owner shall provide a status update on progress in rectifying differences between state water quality standards and FERC License requirements with the annual compliance statement submitted to LIHI. LIHI reserves the right to review or cancel certification and/or modify or add conditions based on the outcome of these matters.*

This condition remains open. Annual reporting was made to LIHI; however, resolution of the issue has not yet been achieved. Its status is discussed further under the Water Quality criterion.

II. RECERTIFICATION PROCESS AND MATERIAL CHANGE REVIEW

Under the current LIHI Handbook recertification reviews are a two-phase process starting with a limited review of a completed LIHI application, focused on three questions:

(1) Is there any missing information from the application?
(2) Has there been a material change in the operation of the certified facility since the previous certificate term?
(3) Has there been a change in LIHI criteria since the Certificate was issued

[1] This report also clarifies, and in some cases corrects information from the application and prior review reports.

In accordance with the Recertification Standards, all Projects currently applying for renewal must go through a full review unless their most recent certification was completed using the 2016 version of the Handbook. Thus, this Stage II report was required for the Island Park Project.

A review of the initial application, dated October 2021, resulted in a Stage I Review Report, dated October 25, 2021. The Stage I report noted that only limited data was missing, thus an updated application was not needed. Instead, the Applicant provided the needed data via email to LIHI on January 5, 2022. The initial review determined there were no "material changes" under the LIHI Handbook.

This Stage II assessment included review of the application package, public records in FERC's eLibrary since the last LIHI certification in January 2016 through April 4, 2022, and annual compliance statements received by LIHI during the past term of Certification. Also, several conference calls were held between Maryalice Fischer of LIHI, Dave Peterson of FRREC, Nick Josten, of GeoSense LLC, consultant to FFREC and the LIHI reviewer, Patricia McIlvaine, to clarify certain issues. Data obtained from these conversations were incorporated into the applicable report sections.

III. PROJECT'S GEOGRAPHIC LOCATION

The Island Park Hydroelectric Project is located at the U.S. Bureau of Reclamation (USBR or Reclamation) Island Park Dam at River Mile (RM) 91 on the Henry's Fork, or North Fork of the Snake River just upstream of the confluence with the Buffalo River. It is located in the northeast corner of Fremont County near the border with Montana and Wyoming as shown on Figure 1. It is within the Caribou-Targhee National Forest and operates under a Special Use Permit with the US Forest Service (USFS) and under an operating agreement with USBR.

The Buffalo River Hydropower Project, LIHI No. 21, also owned by FRREC, is located on the Buffalo River near its confluence with the Henry's Fork. The Buffalo River was recently recertified by LIHI. Both Projects are shown on Figure 2.

The nearest upstream dam is at Henry's Lake, a non-hydropower dam owned by the North Fork Reservoir Company at RM 122. It has no fish passage. The nearest downstream dam on Henry's Fork is the Ashton Hydropower Project, owned by Pacificorp, located at RM 45, which is a FERC licensed project, LIHI No. 61 and has no fish passage. Further downstream is the Chester Diversion, owned by FRREC, located at RM 38.5, FERC License No. 11879; LIHI No. 131. It has both upstream and downstream fish passage.

Figure 1 – Location of the Island Park Project

Figure 2 – Aerial Showing the Island Park and Island Park Dams

IV. PROJECT AND IMMEDIATE SITE CHARACTERISTICS

The USBR Island Park dam is a 9,448-foot-long earth fill structure with a maximum height of 91 feet, and a concrete spillway that joins the outlet tunnel at the bottom of the dam. The dam forms the Island Park Reservoir with a surface area of about 7,794 acres. The dam outlet structure includes a low-level intake structure with trashracks and screens, a 12-foot-diameter, concrete circular intake tunnel 238 feet long, a gate chamber, 75 feet long, at the confluence of the spillway, and a 13-foot-diameter, concrete circular tunnel, 500 feet long, with a 3,400-cfs capacity that discharges into the river southwest of the dam and opposite the powerhouse. As confirmed in conversation with the Applicant, reservoir water is released via a tunnel to the tailrace, either through the low-level outlet, located near the reservoir bottom at elevation 6239 ft (MSL) or the "bathtub" spillway at elevation 6302 ft (there is no spill over the dam). There is a one-foot-high adjustable rubber dam or collar on the USBR spillway, constructed in 1995-1996 by FRREC, for the purpose of maximizing power generation. This rubber collar allows the 1-foot of water that would be spilled at elevation 6302 ft to be diverted for use by the hydropower facility until the maximum capacity of 960 cubic feet per second (cfs) is reached. Both the low-level outlet and spillway gates can be controlled by FFREC. Neither the FERC License nor Water Quality Certification identify the rubber dam or Reclamation gates as part of the hydropower project.

The hydroelectric project is a non-federal power plant that was constructed between September 1992 and July 1994. It consists of the screened intake structure with 3/8-inch openings located near the reservoir bottom, approximately 720 feet of 10-foot-diameter penstock, a concrete masonry powerhouse with two vertical Francis turbine/generators with a combined capacity of 4.8 MW, one 500-horsepower centrifugal blower, one 250-horsepower positive displacement blower, one 200-horsepower variable speed blower with associated controls, a 60' x 100' aeration basin, and a concrete masonry valve house 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 dam.

The dam creates an impoundment of about 7,794 acres with a gross storage of 135,500 acre-feet. FFREC stated in their application that the rubber dam does not affect the normal operating level of the reservoir but allows for the directed release of water to the powerhouse rather than through the spillway. The Project uses waters diverted from the Island Park Reservoir under the direction of the Fremont-Madison Irrigation District and the USBR. Project features are shown in Figures 3 through 8 below. The watershed area at the Island Park dam is approximately 501 square miles.

Land area within the Project boundary is noted as 1.2 acres. Total average annual generation is noted as 18,537 Mwhs.

Figure 3 – Project Aerial

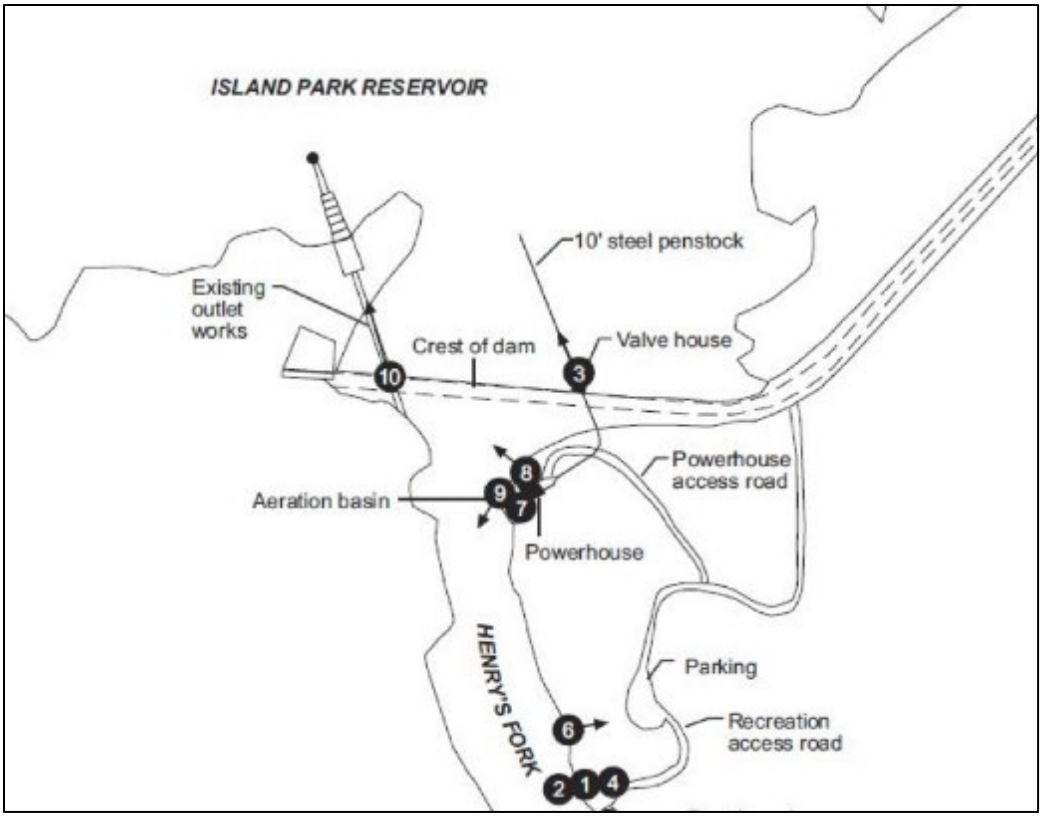

Figure 4 – Project Layout

Figure 5 – USBR Spillway

Figure 6 – USBR Tunnel Outlet

Figure 7 – USBR Island Park Reservoir

Figure 8 – Powerhouse Aeration Basin and Tailrace

V. ZONES OF EFFECT AND STANDARDS SELECTED

Two Zones of Effect (ZOE) were appropriately designated by the Applicant, as illustrated on Figure 9. While the impoundment is formed by the USBR dam, which is not part of the FERC License, I feel it is appropriate to identify it as a ZOE as FRREC has some control of flows released from the impoundment.

- ZOE #1 – Impoundment – near shore is outlined in red
- ZOE #2 – Tailrace – outlined in green

Figure 9 – Project Zones of Effect

The Standards shown below were selected by the Applicant with the exception of those in **red** which were Reviewer assigned. Details of the standard recommendations and compliance with the criteria are presented in Section VIII.

Standards Selections.

	Zone:	1: Impoundment	2: Tailrace/ Downstream
River Mile Extent:		RM 91-91.1	RM 91-90.5
Criterion		**Standards Selected**	
A	**Ecological Flows**	1	2
B	**Water Quality**	~~3~~ **(2)**	~~3~~**(2)**, ~~PLUS~~
C	**Upstream Fish Passage**	1	1
D	**Downstream Fish Passage**	1	1
E	**Shoreline and Watershed Protection**	1	1
F	**Threatened and Endangered Species**	~~1~~**(2)**	~~1~~ **(2)**
G	**Cultural and Historic Resources**	1	1
H	**Recreational Resources**	2	2

VI. REGULATORY AND COMPLIANCE STATUS

The Federal Energy Regulatory Commission (FERC) granted the Project a 50-year License as Project No. 2973 on October 19, 1988, with an expiration date of September 30, 2038. The federal land manager for the Caribou-Targhee National Forest is the USFS. The land occupied by Project facilities (1.2 acres) is under the jurisdiction of the USFS; the hydroelectric Project operates under a Special Use Permit that the USFS issued to FRREC on April 23, 1992, which included a number of requirements that were adopted as License Articles and under a USBR operating agreement.[2] As the dam is a USBR project, many of their recommendations also became License Articles. The 2017 reviewer's report details these requirements. License Articles address numerous issues important to LIHI such as flows and ramping rates, water quality, intake fish screening, site aesthetics, recreation and cultural resources. No fishway prescriptions were filed under section 18 of the FPA.

The FERC License was amended a number of times as summarized below:

- 1994 – This Amendment modified Article 407 removing the requirement of filing as-built drawings of the Brimstone cross-country ski trail, as it is not a Project-related recreation amenity, although it is used to access the facility during snow conditions. The Order did not identify any resource agency comments.
- 1997 – This Amendment modified the approach to be used in the Ramping Rate Plan (Article 403) such that target flow releases from the Island Park Project are 30 to 35 cubic feet per second (cfs) per half-hour to avoid exceeding the required 50-cfs ramping rate per half-hour requirement. Resource agencies concurred with the changes.
- 2003 – This Amendment modified Article 107 to eliminate the requirement for an onsite full-time operator and allowed monitoring and mitigation via the Project's automated systems, with operating personnel available within 30 minutes. Resource agencies did not object to the change.
- 2017 – This Amendment again modified the approach to be used in the Ramping Rate Plan (Article 403) by allowing use of an alternative USGS gage for monitoring downstream river flows that should more accurately reflect Project outflow and minimize future ramping rate deviations. Resource agencies supported the change.
- 2017 – This Amendment eliminated the requirement to monitor Total Gas Pressure (TGP) under Article 107 as past study had shown TGP requirements are met under a wide array of operational conditions, and that gas bubble disease is not a current or likely future concern downstream of the dam. Resource agencies supported the change.
- 2019 – This Amendment temporarily amended Article 401 for a period of five years (from November 1, 2019 to October 31, 2024), in order conduct a trial modification of DO levels for the months of January, February, April, May, and July through December. The proposal was developed in consultation with the resource agencies.

A Water Quality Certification was issued by the Idaho Department of Environmental Quality (IDEQ) on February 7, 1986. It did not contain any conditions.

[2] Copies of the USFS Special Use Permit and USBR Operating Agreement are contained in the LIHI application as are hyperlinks to the FERC license, amendments and Water Quality Certification (WQC).

Both dissolved oxygen and ramping rate deviations from FERC License requirements occurred since the Project was last recertified in 2016. Two water quality deviations were determined by FERC to be License violations. All are discussed under the applicable criteria.

VII. PUBLIC COMMENT RECEIVED OR SOLICITED BY LIHI

The deadline for submission of comments on the LIHI recertification application was March 5, 2022. Public outreach was also made to the stakeholders:

- Rob Van Kirk, Ph.D., Senior Scientist, Henry Forks Foundation (HFF)
- Brett High, Regional Fisheries Manager, Idaho Department of Fish and Game (IDFG)

My inquiries to HFF and IDFG and their responses are in Appendix A. HFF also submitted a comment letter to LIHI which is posted on the LIHI website. All are discussed in the applicable criterion discussions below.

After discussions with Dave Peterson of FFREC, a number of emails were received by LIHI from the various stakeholders FFREC meets with annually which indicates their support of the flow management undertaken by FFREC. These are also included in Appendix A.

VIII. DETAILED CRITERIA REVIEW

A. ECOLOGICAL FLOW REGIMES

Goal: The flow regimes in riverine reaches that are affected by the facility support habitat and other conditions suitable for healthy fish and wildlife resources.

Assessment of Criterion Passage

The Applicant appropriately selected **A-1 - Not Applicable/De Minimis Effect** for the Impoundment (ZOE #1) as allowed for in the LIHI Handbook and **A-2 – Agency Recommendation** for the Tailrace (ZOE #2).

The Project operates in a run-of-release mode based on discharges from Island Park Reservoir that are managed by USBR for flood control, downstream irrigation needs, and fishery habitat. USBR determines the amount of water to be released from the reservoir and FFREC controls how the water is released. Through use of the adjustable rubber collar on the spillway, FFREC can adjust the location of the discharge (from the reservoir bottom or surface) which allows for mixing of water to optimize water temperature for downstream fish habitat. Water is stored at a higher rate during the fall and early winter (less water released) so that more water can be released during the late winter, when it has the greatest benefit per unit of discharge to the fish population. Releases from the reservoir are made through the powerhouse when operating. When the powerhouse is offline or when USBR needs to release water in excess of the powerhouse discharge capacity, the water is released through the reservoir outlet tunnel from the low-level outlet or "bathtub" spillway.

Water allocation and releases during drought conditions are planned for and addressed through the *Henry's Fork Drought Management Plan*, a collaborative plan developed in 2005 by representatives from the Fremont-Madison Irrigation District, Henry Forks Foundation[3] (HFF), the North Fork Reservoir Company, Trout Unlimited, The Nature Conservancy, and USBR. The plan was most recently revised in 2018. One of the goals of this Plan states that releases from Island Park Reservoir are managed to "optimize irrigation, fish and wildlife populations, aquatic processes, hydropower production, and long-term dam maintenance". Water needs are determined and planned via quarterly meetings of the drought management planning committee that consider irrigation needs, precipitation and snow pack, and forecasted precipitation to adaptively manage summer and winter flows into the river. The operation of dam releases has evolved over time under the Henry's Fork Drought Management Plan. Since 2014, greater attention has been paid to spring and summer operations, and small adjustments have been made, when possible, to ensure that the reservoir is 100% full when storage delivery is first needed and to provide flows sufficient for float fishing early and late in the fishing season. While fisheries habitat is one goal, irrigation supply is the dominant driver of releases. As noted in this Plan, "the locally based Henry's Fork Drought Management Planning Committee fine-tunes management of Island Park Reservoir to benefit the fishery and hydroelectric power production to the greatest degree possible within the constraints of the larger water-rights and upper Snake system framework." As winter outflow is the key factor in recruitment of rainbow trout to downstream waters, that has been the variable focused on when looking to support downstream fisheries.

The natural hydrology of the upper Henry's Fork is dominated by groundwater inputs from springs at the base of the Yellowstone Plateau. The river's natural hydrology therefore has lower peak flows and higher base flows than are typical of the region. The stream channel in the three river miles downstream of the dam is highly confined in a narrow canyon with substrate consisting of bedrock, large boulders and cobble resulting in habitat conditions that remain static with depth based only on flow levels. Flow in the Henry's Fork immediately downstream of Island Park Dam is controlled exclusively by operation of the dam, although the effects of dam operations are mediated less than one-half mile downstream at the confluence of the Buffalo River. The Buffalo is a spring-fed tributary that provides year-round flow that ranges from about 200 to 600 cfs. For comparison, median natural flows in the Henry's Fork at the location of the dam range from about 550 cfs during the winter to about 1200 cfs during spring runoff. It should be noted that the USBR releases a minimum flow of 300 cfs, which is not part of the FERC License.

License Requirements

The FERC License Article 403 (Ramping Rates), as modified in 1997 and 2017, limits changes in up and down ramping flow to 30 to 35 cubic feet per second (cfs) per half-hour to avoid exceeding the required 50 cfs ramping rate per half-hour requirement (established in the original License) and allows use of an alternative USGS gage for monitoring downstream river flows that should more accurately reflect Project outflow and minimize future ramping rate deviations. The 50-cfs rate was based on recommendations made by the US Fish and Wildlife Service (USFWS) and IDFG, as noted in the Environmental Assessment during license development. Down ramping is

[3] Henry's Fork Foundation is a nonprofit based in eastern Idaho that uses a science-based, collaborative approach to promote favorable streamflow, good water quality, healthy fish populations, and a positive fishing experience in the Henry's Fork and South Fork Snake River watersheds

only allowed during the hours of 7 p.m. to 5 a.m.

Article 403 also requires development of a Ramping Rate Plan (RRP) and specified that monthly reports shall be provided to the U.S. Bureau of Reclamation (BR), the U.S. Fish and Wildlife Service (FWS), the U.S. Forest Service (FS), and the Idaho Department of Fish and Game (IDFG). The RRP was created in 1994 and modified and approved by FERC in an Order dated March 8, 1995. In that Order FERC added the following requirement:

> "If the licensee identifies a violation, the licensee shall identify the date(s) of the violation and file the monthly data with the Commission in addition to the resource agencies. The licensee shall, to the extent possible, identify the cause, severity, and duration of the violation, any environmental impacts resulting from the violation, a description of the measures implemented or proposed to correct the violation and ensure that similar violations do not recur. When filing the report with the Commission, the licensee shall also include any comments received from the resource agencies regarding the violation."

In 1996, FFREC requested a revision of how they would achieve compliance with their ramping rate restrictions, by using target flow releases of 30 to 35 cubic feet per second (cfs) per half-hour to avoid exceeding the required 50-cfs ramping rate per half-hour requirement. This approach was approved by FERC on February 6, 1997. In 2017, FRREC requested use of a USGS gage for monitoring downstream river flows that should more accurately reflect Project outflow and minimize future ramping rate deviations which was approved by FERC on November 7, 2017. However, in neither case was the 1994 Ramping Rate Monitoring Plan updated to reflect these changes based on information provided by FFREC.

The FERC License Article 126 reads:

> "The Licensee's operation of the Project shall not interfere with the use, storage or release of water from the 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."

As interpreted by FERC in their letter dated November 25, 1996 addressing the 1995 ramping rate report, FERC advised the then Project owner that flows causing exceedance of the ramping rate limit that resulted from releases from the USBR gates are excluded from FERC review for compliance with Article 403.

Ramping Rate Deviations

In June of 2016, HFF raised a series of concerns to FERC about the operations at the Project.[4] HFF discussed in detail a number of ramping rate violations that occurred in the 19-month period (including parts of 2014 through mid-year 2016) and asked FERC to evaluate FFREC's capabilities or attention needed to manage these issues. Their conclusion was that the repeated violations were resulting from FFREC control system problems, failure to restore correct outflows in the short-term, and attempts at operating the plant before fully correcting the control system.

[4] https://elibrary.ferc.gov/eLibrary/filedownload?fileid=01e0ee28-66e2-5005-8110-c31fafc91712

Review of FERC records indicated that FERC corresponded with FFREC a number of times since the HFF 2016 letter. The reviewer did not make a comprehensive review of to what extent and how these issues were remedied as these occurred during the past re-certification review period.

In response to my follow-up data request, FFREC provided the following information in the table below on deviations from their ramping rate limits since last certified by LIHI in 2016. These were the only deviations they reported to FERC beyond the annual report submittals.

DATE	DURATION	CAUSE	REMEDIAL ACTION	FERC VIOLATION?
9/28/2017	2 hrs	grid voltage irregularity	reloaded and tested control software	No
6/8/2018	30 min	wicket gate malfunction	system testing - no fault found	No
7/1/2020	1 @ 15 min 1 @ 30 min	Reclamation gate malfunction due to system short circuit	system testing - no fault found. See footnote below.	No
8/9/2020	1 hr	Reclamation gate malfunction due to system short circuit[5]	short circuit found and corrected	No

As part of the review, the reviewer also looked at the Annual Ramping Rate Reports for 2017-2021. It appears that the following categorization of four deviation types from the ramping rate limits developed by FFREC is used to denote the type of deviation in the annual reports:

Definition of event types

Type 1 - the instantaneous (15-minute sample interval) stage change exceeded ± 0.03 ft (0.03 ft is equivalent to 50 cfs under typical flow conditions).

Type 2 - out-of-compliance by up to 50 cfs above the 50 cfs ramping rate limit.

Type 3 - out-of-compliance by more than 50 cfs above the 50 cfs ramping rate limit and are not associated with known unusual plant circumstances

Type 4 - out-of-compliance by more than 50 cfs above the 50 cfs ramping rate limit and are associated with known unusual plant circumstances

However, FFREC only reports deviations listed as "Type 4" monthly to FERC pursuant to the requirement identified to them in FERC's March 8, 1995 order. Thus, the cause, severity, and duration of the violation, any environmental impacts resulting from the violation, a description of

[5] The August 25, 2020 deviation report to FERC noted that detailed assessment of the plant systems found a short-circuit that resulted in faulty operation of the Reclamation gate. As this August event mimicked the July 2020 event, it was assumed that the short-circuit also caused that event. Similar deviations have not occurred since. As this was a plant system failure, it was considered reportable to FERC as a Type 4 event.

the measures implemented or proposed to correct the violation and ensure that similar violations do not recur is only reported for these events. The following table shows the number of deviation types listed in the annual reports:

	2016	2017	2018	2019	2020	2021
normal	202	194	225	331	194	260
Type 1	101	146	90	101	125	67
Type 2	46	15	29	31	35	30
Type 3	13	9	20	12	9	8
Type 4	4	1	1	0	3	0
Total deviations	164	171	140	144	172	105

It is important to note that the stream gage used to measure the flows upon which the ramping rates are assessed is located downstream of the tailrace in water that also is affected by flows from the dam outlet and other factors that cause "noisy" water level readings such as wind and macrophytes growing at the gage site that interfere with accurate gaging. Based on the calls with FFREC and their consultant, their assessment is that the Type 1 and 2 events are single 15-minute readings and result from accuracy limitations in the equipment used to monitor these flows and are therefore not reported. They also do not report Type 3 deviations because such events often happen equally between times the plant is off and online, and if they cannot find any condition at the plant that may have caused the deviation, they believe the excursion occurred from some other cause or "noise".

This position has been reviewed and found acceptable to the local stakeholders FFREC meets with annually to discuss these and other Project issues based on stakeholder emails received by FFREC and provided to LIHI on April 9, 2022. FFREC stated that such stakeholders agree that the intent of Article 403 to protect downstream fisheries from rapid and large water level changes is being met despite the fact that these measured deviations are occurring. This position is noted in the emails contained in Appendix A. However, it does not appear that FERC has ever officially endorsed this approach of only submitting deviation incident details on Type 4 events although FERC has accepted the annual reports. It is FFREC's position that if FERC was not satisfied with such reporting, they would have notified FFREC.

Given the local stakeholder acceptance that FFREC's Project operation is meeting the intent of Article 403, and the limited number of Type 3 and 4 events that have been occurring annually since 2017, I am recommending that the Island Park Project can be viewed as continuing to conditionally satisfy this criterion. However, I believe that the Condition noted in the Conclusions and Recommendations section of this report is needed to remedy or improve the flow-related issues discussed above.

The Project Conditionally Passes Criterion A – Ecological Flow Regimes

B. WATER QUALITY

Goal: Water Quality is protected in waterbodies directly affected by the facility, including downstream reaches, bypassed reaches, and impoundments above dams and diversions.

Assessment of Criterion Passage

The Applicant selected **B-3 – Site Specific Studies** for both ZOEs. FRREC also applied for a **PLUS** standard for the tailrace. I believe standard **B-2 – Resource Agency Recommendations**, is more appropriate for both ZOES as the purpose of the water quality monitoring being done is to document compliance with limits established by the resource agencies and adopted in the FERC License. Appropriateness of the PLUS standard is discussed at the end of this section.

Waters in the vicinity of the Island Park Project, both in the reservoir and downstream of the dam, are designated for aquatic life: cold water communities – salmonid spawning; primary contact recreation; and domestic water supply. Under the state water quality standards, a salmonid spawning designation invokes more stringent temperature and dissolved oxygen criteria compared to other aquatic life designations. The Idaho 2018/2020 Integrated Report identifies the reach encompassing the Project (assessment unit ID 17040202SK015) as having insufficient data and information to determine if beneficial uses are being attained and is listed as Category 3, not assessed. The 1998 FERC Environmental Assessment (EA) issued during licensing noted that the reservoir is both thermally and chemically stratified, with the water quality ranging from poor to good, based on the season and water depth. The EA noted the water is fully mixed during late September and early October, but during refilling from the fall through winter, the water becomes thermally stratified, ice forms on the surface, and waters from the surface to a depth of about 12 feet become colder and contain more dissolved oxygen that deeper waters, such as at depths of 44 to 46 feet where the dam outlet tunnel and hydropower project intake are located.

License Requirements

Standards for dissolved oxygen (DO), temperature, and total gas pressure (TGP) are required in License Articles 106, 107, 130, 401, and 402. The requirements for these parameters are based on comparison of the parameter level measured at the outlet of the dam and the outlet of the powerhouse. Annual data summaries for DO and temperature are required under Article 130 as modified in 1995. Article 107 requires development of an Operating Plan, approved by both FS and FERC, which identifies how the plant will be operated to stay in compliance with these requirements. FERC must be notified for any exceedances. In 2017, FERC approved discontinuation of TGP monitoring with the concurrence of resource agencies since TGP was shown to be maintained over a range of operational conditions and that gas bubble disease is not a concern downstream of the Project. The adjustable rubber dam on the spillway allows for mixing of water released from the bottom and surface of the reservoir, allowing overall releases from the reservoir to be mixed to help meet License requirements and in an effort to optimize water temperatures for downstream fisheries. Compliance with the temperature limits has not been a continuing problem at the Project since last certified by LIHI, although a FERC letter dated May

22, 2018[6], noted a problem in the period between late June and early September 2017, when station X1's sensor failed. Once the failure was discovered, the sensor was replaced; however, FERC noted that as a result of the failure, there was not sufficient data available to determine compliance during this time period.

Article 401 sets a standard for DO of 7 mg/l or the concentration at the dam outlet structure, whichever is higher, which is greater than the current state standard of 6 mg/l. The Project uses an aeration basin (Figure 10) below the dam to oxygenate water as it comes over the dam's large drop. If DO levels cannot be met, Project operations are shut down resulting in significant loss of generation. Flows are transferred to the dam's gates and outlet which are operated by FRREC.

Figure 10 - Aeration Basin

As the Project's compliance with a limit of 7 mg/l, but not 6 mg/l, was a continuing problem during many years of operation, resulting in numerous reportable deviations, the 2016 LIHI Low Impact Certification included a condition requiring FRREC to resolve this conflict.

The letter submitted to FERC by HFF in June 2016 (noted above) also identified prior concerns with FRREC's DO monitoring procedures and resultant difficulties with meeting the License requirements. Shortly afterwards the two organizations collaborated with each other and HFF took on a support role to the Project. My current inquiry to HFF asked about their current perspective on this issue. Rob Van Kirk told me that he is now confident these concerns have been resolved, as noted in his email response contained in Appendix A.

As a result of the LIHI condition, FRREC, with support from fishery stakeholders, requested a

[6] https://elibrary.ferc.gov/eLibrary/filedownload?fileid=01f60c90-66e2-5005-8110-c31fafc91712

temporary modification to License Article 401 in 2019. The HFF comment letter to LIHI on this 2022 recertification review also noted that they supported this temporary modification to License Article 401. FERC approved modifying the water quality monitoring plan and the Project operations plan for a period of five years, from November 2019 – October 2024. The modification is intended to sustain or improve the health of the fishery while allowing for increased generation during some periods of the year. The plan requires 8 mg/l DO in April and May during the critical fish spawning period for optimal survival and development of rainbow trout eggs and fry, 7 mg/l in March and June on either end of the critical period, and 6 mg/l (the state standard) during the rest of the year to fully protect the trout fishery. The modified plan continues to use the aeration system and unit shut downs to assure compliance.

IDFG has been conducting nearly annual trout population surveys in the reach of Henry's Fork immediately downstream of the dam since 1994, including during the new DO trial period, in order to help assess the fishery's response to the trial DO levels. When I inquired as to any findings to date, in their response email to me, Brett High noted "*what we have observed the last few years is that dissolved oxygen levels downstream of Island Park Dam have not had a negative impact on fish populations. The levels have been sufficient to support all life stages of fish for the species present, and we've found no change in abundance, size structure, fitness, or mortality rates that could be attributed to dissolved oxygen."* He also noted that IDFG continues to support the conclusions stated in the 2017 comment letter to LIHI during the previous recertification period[7].

The following table lists the deviations experienced and reported to FERC since last certified by LIHI in 2016. No deviations were reported since the new temporary 2019 DO limits were applied.

DATE	DURATION	CAUSE	REMEDIAL ACTION	FERC VIOLATION?
3/XX/2017 (exact dates not reported)	5 days	low reservoir DO Operator error in setting aeration blowers at evening rather than daytime settings to meet DO limits	None taken as reason for problem not identified at the time.	Yes, due to failure to detect and report deviation to FERC
6/XX/2017 (exact dates not reported)	4 days	low reservoir DO Same as above	adjusted operations instructions to account for the early morning dip in DO.	Yes, due to failure to detect and report deviation to FERC
8/28/2017	13 days	low reservoir DO beyond plant's re-aeration capacity to resolve	notified FERC and other stakeholders. FRREC continued to operate to meet 6 mg/l and not release water from gates per local	No

[7] https://lowimpacthydro.org/wp-content/uploads/2021/10/IDFG-letter_20171025_071217.pdf

DATE	DURATION	CAUSE	REMEDIAL ACTION	FERC VIOLATION?
			stakeholder advice.	
4/4/2018	19 hrs	overheated re-aeration blower	installed backup fan and modified plant procedures to use surveillance cameras to help detect nighttime blower failures	No
5/23/2018	5 hrs	flow change requiring partial transfer of flow to Reclamation gates	modified plant procedures to maintain all blower settings until flow change complete	No
7/25/2018	14 hrs	overheated re-aeration blower	modified blower system to draw outside air; install alarm to notify operator of low DO	No

2020 was the first full year using the new temporary DO standards. The 2020 Water Quality Report showed that DO levels were met with the aeration system on all but four days, at which time operations were shut down, resulting in significantly less loss of generation than in previous years.

Based on my review of available information and lack of stakeholder comments to the contrary, I believe the Project continues to conditionally satisfy the requirements for this criterion. The recommended condition is a modification of the one associated with the 2016 Certification.

FRREC proposed that since the Project enhances DO and temperature discharge via an adaptive management approach to monitor and adjust operations to protect water quality, the PLUS standard is met. While it is true that certain management procedures are implemented to ensure compliance with DO License requirements, (e.g., the aeration basin and plant shut down) and release of reservoir water at the surface to meet License temperature limits, I believe these are done to satisfy the **Standard B-2 Agency Recommendations**. The requirement for a PLUS is that the adaptive management program must be "in addition to satisfying one or more of the standards" as noted on page 8 of the 2nd Edition of the Handbook. While the five-year temporary modification to License Article 401 does incorporate higher levels of DO during critical salmon spawning months which would be an enhancement, the new DO limits, if adopted, would then become the License requirement. I believe a PLUS standard must have an adaptive management program that enhances the environment beyond the License (i.e., agency recommendation) requirements.

The Project Conditionally Passes Criterion B – Water Quality

C. UPSTREAM FISH PASSAGE

Goal: The facility allows for the safe, timely, and effective upstream passage of migratory fish. This criterion is intended to ensure that migratory species can successfully complete their life cycles and maintain healthy populations in areas affected by the facility.

Assessment of Criterion Passage

The Applicant appropriately selected **A-1 - Not Applicable/De Minimis Effect** for both ZOEs. The Project is located in the Snake River headwaters with natural barriers downstream (Figure 11), preventing diadromous fish from reaching Project waters.

Figure 11 - Upper Mesa Falls, Targhee National Forest, on Henry's Fork 26 miles downstream of the Project.

Henry's Fork supports rainbow trout, brook trout, mountain whitefish, and several non-game species. In the 1930s, construction of the nearby Buffalo River Dam blocked upstream fish passage to the Buffalo River, the only large tributary to the Henry's Fork between Island Park Dam (River Mile 91.7) and Mesa Falls (River Mile 65.0) located about 26 miles downstream (Figure 11), two barriers that isolate this reach of Henry's Fork.

The Idaho Department of Fish and Game (IDFG) Fisheries Management Plan 2019-2024 identifies the river as a coldwater fishery managed for wild rainbow and brook trout. The reach above the dam supports a world-famous wild rainbow trout fishery. Since the Project is in the Snake River headwaters with natural barriers downstream, diadromous fish did not use the Project area historically and there is no program to introduce them. There are also no formal passage

prescriptions for riverine fish at Island Park Dam, although authority is reserved under License Article 404 should the USFWS elect in the future to prescribe passage.

Based on my review of available information and lack of Project changes, I believe that the Project continues to satisfy this criterion.

The Project Passes Criterion C – Upstream Fish Passage

D. DOWNSTREAM FISH PASSAGE AND PROTECTION

Goal: The facility allows for the safe, timely, and effective downstream passage of migratory fish. For riverine (resident) fish, the facility minimizes loss of fish from reservoirs and upstream river reaches affected by Facility operations. Migratory species are able to successfully complete their life cycles and maintain healthy populations in the areas affected by the Facility.

Assessment of Criterion Passage

The Applicant has appropriately selected **D-1 - Not Applicable/De Minimis Effect** for both ZOEs.

As noted above, there are no migratory species in this section of the Henry's Fork due to the downstream natural barrier, and there are no agency prescriptions or requirements in the License for downstream fish passage. Resident species include rainbow trout, brook trout, mountain whitefish, and several non-game species, none of which require passage to complete their life cycles. Some of these species are stocked in Island Park Reservoir.

As noted in the LIHI application, the IDFG fishery management plan reports that densities of trout downstream of the Project in Box Canyon have increased since 2008, with improvements by USBR in winter flow management from Island Park Dam. Improved communication and coordination among water managers and users required in the latest Drought Management Plan also serves to enhance downstream fishery conditions.

Specific to the hydro facility, the aeration basin below the dam oxygenates discharged water and promotes fish survival and supports habitat below the dam. In accordance with License Article 128, a 3/8-inch fish screen on the powerhouse intake, the design of which was approved by USFWS, keeps fish from becoming entrained. While small fish could become entrained, the intake is located at the bottom of the reservoir, an area not occupied by small fish. The conclusion noted in the 1988 FERC EA was that the river fisheries would be "adequately protected" with the 3/8-inch screening and the fact that the intake is from the lower reservoir where DO levels are low and generally avoided by younger fish.

Based on my review of available materials, and lack of Project changes, I believe that the Island Park Project continues to satisfy this criterion

The Project Passes Criterion D – Downstream Fish Passage and Protection

E. SHORELINE AND WATERSHED PROTECTION

Goal: The Facility has demonstrated that sufficient action has been taken to protect, mitigate and enhance the condition of soils, vegetation and ecosystem functions on shoreline and watershed lands associated with the facility.

Assessment of Criterion Passage

The Applicant has appropriately selected **Standard E-1, Not Applicable/De Minimis Effect** to pass the Shoreline and Watershed Protection criterion for both ZOEs.

The lands at the Project site and the contributing watershed are primarily under federal ownership or control, including the impoundment, as part of the Caribou-Targhee National Forest. The area within the FERC Project boundary is estimated to be 1.2 acres.

There continues to be no requirement for a shoreline management plan or similar protection plans. There are no lands of significant ecological value and there are no designated critical habitats for threatened or endangered species within the Project area. The erosion control plan and control measures, solid waste and wastewater disposal plan, and hazardous materials storage and spill prevention plan required by the License have all been implemented. License Article 112 required a USFS approved plan for Project design in a manner to preserve/enhance site aesthetics. The LIHI application noted this was accomplished by burying the penstock and transmission line and using building materials and colors that blend in with the surrounding area.

Based on my review of available information, and lack of Project changes, I believe the Project continues to satisfy this criterion.

The Project Passes Criterion E – Shoreline and Watershed Protection

F. THREATENED AND ENDANGERED SPECIES PROTECTION

Goal: The Facility does not negatively impact federal or state-listed species.

Assessment of Criterion Passage

The Applicant selected **Standard F-1 – Not Applicable / De Minimis Effect** for both ZOEs. However, as there are several species potentially on or near the site, but onsite habitat is limited and if they occur, no impacts to them are expected, I believe that **Standard F-2 - Finding of No Negative Effect** is more appropriate.

An online data check was conducted in October 2021 for federally listed species in the immediate Project area. The report identifies the following species as possibly present: the threatened Canada lynx and grizzly bear along with the monarch butterfly which is a candidate for listing. While there is federally designated critical habitat for both the Canada lynx and grizzly bear, location of the habitat was not provided in the USFWS report. It is unlikely that the Project lands would serve

as critical habitat for these species given the Project's small size.

A similar search of available records for state listed species was not conducted because, while the state of Idaho does maintain a list of fish and wildlife for classification purposes, it does not have an endangered species act law. The state list is a compilation of various federal lists and includes Canada lynx which is classified as threatened under the federal Endangered Species Act (ESA) and by USFS. The list apparently incorrectly identifies that grizzly bear has been removed from the federal ESA, even though it remains as a threatened species by the US Fish and Wildlife Service under the ESA.[8, 9]

The Project lands occupy only about 1.2 acres, mostly on federal lands which do not include significant habitat for the listed species. No Project operations or maintenance activities would likely impact the species even if they were present.

Based on my review, I believe the Project continues to satisfy this criterion.

The Project Passes Criterion F – Threatened and Endangered Species Protection

G. CULTURAL AND HISTORIC RESOURCE PROTECTION

Goal: The Facility does not inappropriately impact cultural or historic resources that are associated with the Facility's lands and waters, including resources important to local indigenous populations, such as Native Americans.

Assessment of Criterion Passage

The Applicant has selected **Standard G-1 – Not Applicable/De Minimis Effect** for both ZOEs**.**

The original LIHI reviewer's report from 2011 noted that the USBR Island Park Dam and Reservoir, which is not FERC regulated, was determined to be eligible for listing on the National Register of Historic Places, mainly because of its contribution to the historic development of northeastern Idaho. Mitigative measures approved by the Idaho State Historic Preservation Office (SHPO) to address impacts resulting from the construction of the powerhouse were implemented.

Surveys were conducted at the time of licensing and no cultural or historic resources within the hydropower Project footprint were found. As noted in the 2016 LIHI recertification application, Appendix I, a form was included that showed the SHPO had made a no-effect finding on December 9, 1985 during the licensing process. However, License Article 405 requires consultation and development of a cultural resources management plan with USFS and USBR approval for any land clearing or earth disturbance. FERC also recommended in the 1988 relicensing EA that prior to

[8] https://idfg.idaho.gov/species/taxa/list?usesa[]=Delisted&usesa[]=Proposed&usesa[]=Candidate&usesa[]=Threatened&usesa[]=Endangered

[9] The USFWS conducted a five-year review for grizzly bear in March 2021 and recommended no change in its threatened status.

land-clearing or land-disturbing activities, consultation should occur with the SHPO, USFS, and USBR about the need to conduct surveys and develop avoidance and mitigation plans with approval of USFS prior to any disturbance.

The LIHI application states that no facility changes have taken place in the past five years. Based on my review of the available materials, it appears that the Project continues to satisfy this criterion.

The Project Passes Criterion G – Cultural and Historic Resource Protection

H. RECREATIONAL RESOURCES

Goal: The facility accommodates recreation activities on lands and waters controlled by the facility and provides recreational access to its associated lands and waters without fee or charge.

Assessment of Criterion Passage

The Applicant has appropriately selected with **Standard H-2, Agency Recommendation** for both ZOEs.

The primary recreation activity on the river and around the Project is fishing and boating, including in the reservoir. License Articles 105 and 133 required consultation with the National Park Service, USFS, USBR, and the Idaho Department of Parks and Recreation, and filing of a Report on Recreational Resources which was completed at the time of licensing. Recreation enhancements included making improvements and additions to the Project's Box Canyon boat launch site. Specifically, FRREC reconstructed the existing parking area, improved the existing access road and boat launch, and installed restroom facilities, a fishing platform, informative/interpretive signs, and a trail at the site (also associated with the Buffalo River Project).

Article 407 required replacing and maintaining portions of the USFS-owned Brimstone cross country ski trail that would cross the Project and would be disturbed by construction and operation[10]. This trail is part of the cross-country ski trail system that is maintained by the USFS.

FERC's most recent environmental inspection, conducted in 2017, found all resources were in satisfactory condition, with the exception of a Part 8 sign and lack of a Public Safety Plan. Both were remedied in 2018.

Based on my review, I believe that the Project continues to satisfy this criterion.

The Project Passes Criterion H – Recreational Resources

[10] As previously noted, the 1994 License amendment modified Article 407 removing the requirement of filing as-built drawings of the Brimstone cross-country ski trail, as it is not a Project-related recreation amenity,

IX. GENERAL CONCLUSIONS AND REVIEWER RECOMMENDATION

Based on my review, I believe that this Project conditionally continues to meet the requirements of a Low Impact facility and recommend it be recertified for a ten-year period with the following conditions.

Condition 1 (modified by LIHI) – The facility Owner shall include a discussion of ramping rate measurement and reporting at annual stakeholder meetings and shall provide to LIHI in annual compliance statements a summary of the annual meeting and any stakeholder comments and/or concerns on ramping rates. Should FERC require additional ramping rate deviation reporting or modifications to the existing ramping rate plan during the LIHI Certification term, the facility Owner shall provide to LIHI all related correspondence and a copy of any FERC-approved revised plan within 60 days of its approval.

Condition 2 - In its annual compliance reports, the facility Owner shall provide an update on the temporary five-year Dissolved Oxygen limit test program, scheduled to be completed in October 2024. The intent of this temporary program is to rectify the differences between state water quality standards and FERC License requirements. Should this program result in permanent adoption of new DO levels, the Owner shall submit FERC's documentation modifying these requirements, and both FERC's and USFS's approval of the revised Plan that requires this approval. LIHI reserves the right to review the certification and/or modify or add conditions based on the final outcome of this matter.

APPENDIX A

From: "Rob Van Kirk" <rob@henrysfork.org>
To: PBMwork@maine.rr.com
Cc: "Matt Hively" <matt@henrysfork.org>
Bcc:
Priority: Normal
Date: Tuesday February 15 2022 3:08:21PM
Re: Island Park application to LIHI

Hi Pat,

Thank you for contacting me. I'm copying this to Matt Hively, who coordinates our FERC project engagement.

The issues we raised in the document you attached have all been remedied, and operations at the Island Park Project have gone very smoothly over the past few years. We are pleased at the improvements Fall River Rural Electric Cooperative has made, and we work very well with them. I don't have any particular concerns at this time, and I'm confident that if any new issues emerge at Island Park, we will be able to work through them at the local level.

I'll talk with Matt about submitting a formal comment to this effect, just so we are on the record.

Rob

Rob Van Kirk, Ph.D.
Senior Scientist
Henry's Fork Foundation
P.O. Box 550
Ashton, ID 83420
208-652-3567 OFFICE
208-881-3407 CELL
208-652-3568 FAX

rob@henrysfork.org
HFF blog

On Tue, Feb 15, 2022 at 11:58 AM <PBMwork@maine.rr.com> wrote:

> Dear Mr. VanKirk
>
> I am the independent reviewer assigned to the application submitted by Fall River Rural Electric Cooperative for possible re-certification of their Island Park Project.
>
> I know that the Henry Forks Foundation has expressed concerns to FERC in the past about FRREC's attention or capabilities to manage the operation of their Project in compliance with their license requirements, as detailed in the attached letter. I also know that more recently, you have supported them in regards to filing an amendment request for temporary modification of their DO limits, so it appears that HFF and FRREC may be working together in a positive way.
>
> As you know, LIHI seeks comments from stakeholders such as HFF as a means of gaining more insight into projects that goes beyond what we are provided in the LIHI application or found on FERC eLibrary. That public comment period for Island Park closes 5pm on March 5, 2022.
>
> I encourage you to submit any comments you may have about the project. In particular, it would be great if you can include your current thoughts about whether these past concerns about FRREC remain or if they have been remedied in part or whole. If you would prefer to address my question separate from any public comment you submit you can just email your thoughts to me. However, while such emails are attached to my report, (which is linked to the website upon conclusion) they are not a directly linked document as a comment letter you may send directly to LIHI wold be.

Thank you for your time and I hope to hear from you either by email or via a comment letter submitted to LIHI.

Pat McIlvaine

From: "High,Brett" <brett.high@idfg.idaho.gov>
To: "PBMwork@maine.rr.com" <PBMwork@maine.rr.com>
Cc:
Bcc:
Priority: Normal
Date: Thursday February 24 2022 10:40:40AM
RE: Island Park Hydropower Project LIHI Recertification Application

---

Pat,

Thanks for reaching out. I responded to your questions below and my responses are in blue. Let me know if you have any additional questions.

Thanks,

Brett

Brett High

Regional Fisheries Manager

Upper Snake Region

4279 Commerce Circle

Idaho Falls, ID 83402

(208) 525-7290

From: PBMwork@maine.rr.com <PBMwork@maine.rr.com>
Sent: Friday, February 18, 2022 12:46 PM
To: High,Brett <brett.high@idfg.idaho.gov>
Subject: Island Park Hydropower Project LIHI Recertification Application

Hi Mr. High

I am the independent reviewer assigned to the application submitted by Fall River Rural Electric Cooperative for possible re-certification of their Island Park Project by the Low Impact Hydropower Institute (LIHI).

I understand that IDFG has been conducting trout population studies immediately below this Project during a trail period running from Nov 2019 to Oct 2024 in order to assess the fishery's response to the trial dissolved oxygen limits being tested, with results discussed at annual meetings. I was wondering if you can comment on what you have found to date.

Idaho Department of Fish and Game staff have monitored trout abundance in the tailrace section of Island Park Dam on a near annual basis since 1994 because trout abundance, size structure, fitness, and mortality rate information from this section provide a good measure of what fish populations in the Henrys Fork Snake River are doing in general. While we can make inference to other things, like dissolved oxygen level impacts, the reason for our monitoring efforts are more broad in scope. However, what we have observed the last few years is that dissolved oxygen levels downstream of Island Park Dam have not had a negative impact on fish populations. The levels have been sufficient to support all life stages of fish for the species present, and we've found no change in abundance, size structure, fitness, or mortality rates that could be attributed to dissolved oxygen.

Also, in 2017 IDFG submitted the attached letter to LIHI when FRREC was also seeking low-impact certification. Does the IDFG still support the conclusions stated in this letter?

Yes. The conclusions stated in the 2017 letter still reflect our opinions of the project.

Finally, I would like to get your thoughts about FRREC's overall attention to their environmental commitments for this project.

The Idaho Department of Fish and Game has a good working relationship with Fall River Rural Electric. This is due in part to their willingness to cooperate on water management actions that benefit our fishery resources and the habitats they rely on when possible. It also stems from their attentiveness to the stipulations and requirements listed in their FERC license. We believe they make concerted efforts to follow their FERC license and provide regular updates to us when they run across problems that limit their ability to do so. These shortcomings are not common, and are usually due to factors outside of their control.

As you know, LIHI seeks comments from stakeholders as a means of gaining more insight into projects that goes beyond what we are provided in the LIHI application or found on FERC eLibrary. That public comment period for Island Park closes 5pm on March 5, 2022. You can submit the answers to my questions via email to me or you can alternatively address my questions in your comment letter to LIHI if you plan on submitting such comments. You can visit the LIHI website to conveniently forward a comment letter to LIHI.

Thank you for your time and I hope to hear from you either by email or via a comment letter submitted to LIHI.

Pat McIlvaine

Gmail Nicholas Josten <jostnich@gmail.com>

Island Park Ramping Rate

Nicholas Josten <nick.gsense@gmail.com> Thu, Mar 31, 2022 at 3:48 PM
To: Rob Van Kirk <rob@henrysfork.org>, Matt Hively <matt@henrysfork.org>, Alex Bell <Alex.Bell@deq.idaho.gov>, Brett High <brett.high@idfg.idaho.gov>, Jacob Gray <jacob.gray@idfg.idaho.gov>, "Mabey, Lee" <lmabey@fs.fed.us>
Cc: Dave Peterson <Dave.Peterson@fallriverelectric.com>, Peter Josten <peter.gsense@gmail.com>

Stakeholders:

Fall River is in the process of renewing its Low Impact Hydro certification. The LIHI reviewers have questioned the significance and reportability of the many Type 2 and 3 deviations that have been identified in our annual ramping rate reports over the years. Since we just had this discussion you are aware that these deviations would result in hundreds of "deviation notices" each year. For purposes of their current review LIHI has asked for some kind of confirmation from project stakeholders that they are aware of these deviations and concur with the following:

1) the Type 2 and Type 3 deviations are not associated with any known element of hydropower operations
2) the Type 2 and Type 3 deviations do not appear to have any adverse impact on the fishery resource
2) the current level of ramping rate deviation reporting by Fall River is adequate

We would appreciate it if you could concur with this summary, which we would forward to LIHI to support the certification renewal. Over the long term Fall River may have to revise the ramping rate plan in order to more meaningfully identify reportable deviations.

Nick

Nicholas E Josten
208-520-5135
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GeoSense LLC
2742 St Charles Ave
Idaho Falls, ID 83404
(PLEASE NOTE NEW BUSINESS EMAIL)

Gmail Nicholas Josten <jostnich@gmail.com>

Island Park Ramping Rate

Mabey, Lee -FS <lee.mabey@usda.gov> Fri, Apr 1, 2022 at 8:25 AM
To: Nicholas Josten <nick.gsense@gmail.com>

Nick,

You are correct as I recall from the meeting there was no actual physical increase in visible flows and these appear to be a one point in time instrument deviation/malfunction.

Also last year I did respond to an Inquiry from the LIHI on the Buffalo River plant.

Lee

Lee Mabey
Forest Fisheries Biologist

Forest Service

Caribou-Targhee National Forest

p: 208-557-5784
c: 208-419-8920
lee.mabey@usda.gov

1405 Hollipark Drive
Idaho Falls, ID 83401
www.fs.fed.us

Caring for the land and serving people

From: Nicholas Josten <nick.gsense@gmail.com>
Sent: Thursday, March 31, 2022 3:49 PM
To: Rob Van Kirk <rob@henrysfork.org>; Matt Hively <matt@henrysfork.org>; Alex Bell <Alex.Bell@deq.idaho.gov>; Brett High <brett.high@idfg.idaho.gov>; Jacob Gray <jacob.gray@idfg.idaho.gov>; Mabey, Lee -FS <lee.mabey@usda.gov>

Gmail Nicholas Josten <jostnich@gmail.com>

Island Park Ramping Rate

Matt Hively <matt@henrysfork.org> Fri, Apr 1, 2022 at 12:52 PM
To: Nicholas Josten <nick.gsense@gmail.com>

Nick,

For purposes of LIHI recertification, HFF is aware of the ramping rate deviations at the Island Park facility and is satisfied with FRREC's subsequent response to stakeholders.

Thank you,

Matt
[Quoted text hidden]
--
Matt Hively

Aquatic Resources Coordinator

Henry's Fork Foundation

801 Main St.

Ashton, ID, 83420

208-652-3567

Real-Time Water Quality Data

Gmail Nicholas Josten <jostnich@gmail.com>

Island Park Ramping Rate

High,Brett <brett.high@idfg.idaho.gov> Fri, Apr 1, 2022 at 4:26 PM
To: Nicholas Josten <nick.gsense@gmail.com>
Cc: Dave Peterson <Dave.Peterson@fallriverelectric.com>, Peter Josten <peter.gsense@gmail.com>, "Gray,Jacob" <jacob.gray@idfg.idaho.gov>

Nick,

As we discussed earlier this week, IDFG feels that the current level of ramping rate deviation reporting by Fall River is adequate to cover our concerns on changing water levels. We also feel like most of the minor deviations are likely caused by instrument error given the brief period of deviation and likely do not need to be reported to the stakeholder group. Since, these minor deviations are likely an artifact of instrument error, we do not anticipate them to have an adverse impact on fish populations. However, deviations that exceed standards for more than a few hours should be reported to the stakeholder group, as their likelihood of being caused by instrument error decreases with increasing time, and thus they may have the potential to adversely affect fish populations. Please let me know if you have any questions, and feel free to share this with LIHI reviewers.

Thanks,

Brett

Brett High

Regional Fisheries Manager

Upper Snake Region

4279 Commerce Circle

Idaho Falls, ID 83402

(208) 525-7290

From: Nicholas Josten <nick.gsense@gmail.com>
Sent: Thursday, March 31, 2022 3:49 PM
To: Rob Van Kirk <rob@henrysfork.org>; Matt Hively <matt@henrysfork.org>; Alex Bell <Alex.Bell@deq.idaho.gov>; High,Brett <brett.high@idfg.idaho.gov>; Gray,Jacob <jacob.gray@idfg.idaho.gov>;

Island Park Ramping Rate

Alex Bell <Alex.Bell@deq.idaho.gov> Thu, Apr 7, 2022 at 8:44 AM
To: Nicholas Josten <nick.gsense@gmail.com>
Cc: Peter Josten <peter.gsense@gmail.com>

Nick,

Similar to what other have said, I am less concerned with the single point anomalies. I would support the solutions that you have already discussed--i.e. dismissing durations less than an hour / documenting plant trips. I also want to voice support to change the type 1 / type 2 nomenclature, as that was not very clear.

Thanks,

Alex

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[Quoted text hidden]
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