

Low Impact Hydropower Institute AMENDED Application for Low Impact Hydropower Certification: Island Park Hydroelectric Project

Introduction

This report reviews the amended application for Low Impact Hydropower Certification of the Island Park Hydroelectric Project, located on the Henry's Fork of the Snake River in Idaho. The Fall River Rural Electric Cooperative (Fall River) previously submitted an application for certification of its Island Park Facility, but that application was found to be incomplete because it did not address the associated Island Park Dam and Reservoir, owned by the United States and operated by the U.S. Bureau of Reclamation (USBR). In order to qualify for certification as Low Impact through the Institute's Certification Program, an Applicant must address a complete "Facility" which is defined in the Criteria as "a hydropower dam and associated project works, with one power generation source (i.e. powerhouse)." See Part VI, Section C.8 of the Certification Package and Criteria. The amended application is in response to that finding.

For purposes of this application review, the "Island Park Project" consists of the Island Park Hydroelectric Project (Powerhouse) owned and operated by Fall River, and the Island Park Dam and Reservoir, owned by the United States and operated by USBR in association with the Fremont-Madison Irrigation District. Although the Island Park Hydroelectric Project is licensed by the Federal Energy Regulatory Commission (FERC), the USBR dam and reservoir are not within FERC's jurisdiction. Thus, the following analysis of criteria for Low Impact Hydropower Institute (LIHI) certification includes dual-analyses in some cases to account for the nature of ownership and jurisdiction for the facility.

In its original application, Fall River included letters from relevant resource agencies. Some of the letters indicated that the Fall River not only follows their recommendations but is also very cooperative and proactive in trying to achieve environmental objectives. The FERC license incorporates all of the agencies' most stringent recommendations and the facility makes good faith efforts to operate the facility in an environmentally sensitive way. However, the agencies confined their comments and responses to the FERC-licensed hydropower facility only, and did not consider instream flows and other issues as they pertained to the dam and reservoir operation. Fall River did not include any new letters from resource agencies to address the USBR dam and reservoir in Fall River's amended application.

We have provided the FERC license and Environmental Assessment in Appendix A. Documentation of our conversations with resource agencies is provided in Appendix B. Details of the Montana-Tennant analysis are in Appendix C. Letters of support for Certification of the Project (from the original application) can be found in the Application's Exhibit C.

Facility Description

Island Park Dam, Reservoir and Hydroelectric Plant 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 Hydroelectric Project was constructed between September 1992 and July 1994 on the existing (USBR) Island Park Dam. The Island Park Dam was constructed in 1939 by the USBR. The Island Park Hydroelectric Project is a FERC-licensed run of the river project using waters diverted from

the Island Park Reservoir under the direction of the Fremont-Madison Irrigation District and the USBR. Fall River owns the Island Park Hydroelectric Project.

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) (FERC 1988b).

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 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 through 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. (Fall River is required to pay the federal government a falling water charge each year based on annual generation). 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). The Island Park Hydroelectric Project thus 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 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 plant 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. Over the past four years, the Rubber Dam Advisory Committee has been working with the applicant to try to optimize the temperature released from the reservoir during the spill period.

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.

Low Impact Certification Criteria

A. Flows:

Criteria

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 conditions, and seasonal and episodic instream flow variations) for both the reach below the tailrace and all bypassed reaches?

YES.—as to ramping rates

The FERC license contains ramping rate requirements (FERC 1988a, FERC 1995a, FERC 1997) for power plant operation. Subsequent amendments to the FERC ramping rate license article have been approved by federal and state agencies. The most recent modifications to the FERC ramping rate amendment occurred in 1997; the USFS, USFWS, and IDFG all concurred with the modifications

(USFWS 1996, USDA Forest Service 1996, IDFG 1996). The ramping rates reflect the most protective rates submitted by any resource agency in license proceedings.

The USBR does not release a specified minimum flow through its outlet tunnel. The FERC license contains no requirements for minimum flows from the Island Park Hydroelectric Project as FERC states it does not have the authority to require them. Although some agencies expressed concern about the lack of minimum flows below the dam during the FERC licensing process, none of them formally requested minimum flows as part of their comments and conditions on the license application to FERC.

If yes, go to B. If N/A, go to A2.

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

YES.

Because the flows released from the USBR dam are not part of the FERC-licensed facility, and because there have been no agency-recommended minimum flows due to the irrigation district constraints on flow releases from the dam, we also prepared a Montana-Tennant method analysis of the flows below the Island Park Dam.

Considering average daily flows for the Oct-Mar and Apr-Sept seasons since 1994, the flows released from the Island Park Hydroelectric Project meet “good” habitat flow standards, in fact, they meet “excellent” standards for at least the reach of river between the dam and Buffalo River. Details of the analyses are provided in Appendix C.

If yes, go to B. If no, go to A3.

PASS.

Discussion

With the exception of ramping rates, there have been no agency recommendations regarding the downstream flows for this project within the official legal or administrative proceedings to which LIHI criteria apply (see Part IV, Certification Criteria, page 4). Although FERC and resource agencies have expressed opinions about downstream flows, and there have been numerous studies of flows and fish habitat in the basin, there has been no official agency recommendation that can be incorporated into our analysis based on the criteria.

At the LIHI Board’s request, we tried to determine the location and amounts of diversions from the Henry’s Fork River that are held in Island Park Reservoir for release during the irrigation season by Fremont-Madison Irrigation District (FMID). The FMID is an umbrella organization of the Irrigation Districts, canal companies and individuals. The capacity of the Island Park Reservoir (135,000 acre-feet) is fully used by FMID for downstream irrigation purposes. (The capacity of 135,000 acre-feet translates into approximately 800-900 cfs total, were it diverted at one location at one time.)

FMID water is not diverted out of Henry’s Fork River for over 50 miles downstream of Island Park Dam. The largest FMID diversion is 600 cfs at the Cross-Cut Canal, approximately 55 miles below Island Park Dam, just below the confluence with the Fall River. Just above the Fall River confluence is the next largest and only other FMID diversion between Island Park and Cross Cut Canal, the 35-cfs Dewey Canal. Additionally, not all of the diversions along Henry’s Fork between Island Park Dam and Cross-Cut

canal are FMID-operated, making it even more difficult to determine the amount of water diversions along this reach.

B. Water Quality:

Criteria

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?**

YES.

The state water quality certification conditions were incorporated into the FERC license. FERC License Articles 106, 107 and amendment, 129, 130, 401 and amendment, and 402 and amendment all pertain to water quality (FERC 1988a, 1992a, 1995b). Articles 107, 401 and 402 have to do with continuing operation of the project to meet water quality criteria. The most recent recommendations from the agencies were in 1994 and 1995 (USFWS 1994, 1995; USDA Forest Service 1995; IDFG 1995). On 8/2/95 FERC approved a Water Quality plan filed 5/17/94, and supplemented 3/10/95 by the applicant (FERC 1995b). The reservoir also meets water quality criteria (IDEQ 2001). The reservoir and downstream reaches are required to meet the following categories of water quality criteria:

- water quality appropriate for the protection and maintenance of viable aquatic life communities for cold water species;
- water quality appropriate to provide habitat for self-propagating populations of salmonids;
- water quality appropriate for drinking water supplies; and
- water quality appropriate for primary contact with recreational users, such as during swimming or water skiing.

The reservoir and downstream reach are designated as “special resource waters” by the IDEQ. This means that the water quality of these areas satisfy at least one of the following: (a) water is of outstanding high quality exceeding criteria for both primary contact recreation and cold water aquatic life; (b) water is of unique ecological significance; (c) water possesses outstanding recreational or aesthetic qualities; (d) protection of the water is in the best interest of the people of Idaho; (e) water is part of the National Wild and Scenic River System or within a State or National Park; and/or (f) protection of the quality of water is necessary to maintain an existing, but jeopardized beneficial use. Finally, a TMDL is being conducted for the Henry’s Fork subbasin, including the Facility area by the IDEQ. No determinations have been made to date.

If yes, go to B2.

- 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.

IDEQ confirmed that the facility area and downstream reach of the Fall river meet state water quality standards (IDEQ 2000).

If no, go to B4 for post-2001

- 4) In order to maintain Low Impact Hydropower certification in the future, the Facility owner/operator must implement by January 1, 2002, a program to monitor in a periodic basis – and to make that monitoring available to the state and the public – water quality parameters that may be affected by the facility.**

The applicant did not address this question, but because the information is not required at this time, the applicant passes criteria (B) Water Quality.

As part of its FERC license conditions (Articles 106 and 107), the Island Park Hydroelectric Project continuously monitors dissolved oxygen, temperature, total gas pressure, and turbidity with hourly recording of calculated averages at five stations downstream of the facility. Water temperature, dissolved oxygen and total gas pressure are monitored at three locations: station x-1 located at the reservoir bottom, station x-3 located at the aeration basin outlet, and station x-4 located 700 feet downstream of the project. These data are available to the state and public and are provided to the FERC Office of Hydropower Licensing. This monitoring also satisfies the request of the Shoshone-Bannock Tribes to monitor temperatures both upstream and downstream of the Facility to assess potential impacts to trout spawning conditions.

PASS.

Discussion:

With the addition of the rubber dam in 1995, Fall River is better able to manage water temperatures for downstream fish habitat requirements. Over the past four years, the Rubber Dam Advisory Committee has been working with the applicant to try to optimize the temperature released from the reservoir during the spill period. A meeting of the Rubber Dam Advisory Committee to discuss the overall effectiveness of the rubber dam is scheduled for sometime in Spring 2001. More data regarding the impact of the rubber dam on water temperatures downstream of the Facility may be available at that time.

After some initial problems, the licensee has been in compliance with Water Quality conditions in its FERC license and has made a good faith effort to address the temperature and DO issues in its releases from the powerhouse.

C. Fish Passage and Protection:

Criteria

- 1) 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?**

There are no mandatory fish passage prescriptions.

IDFG and USFS confirmed that there are no anadromous and catadromous fish in the project area due to natural barriers (falls) downstream of the project (USDA Forest Service 2000b; IDFG 2000b).

The answer to C1 given by the applicant is yes, but technically it is N/A since there are no mandatory fish passage prescriptions. Moreover, questions C2 through C4 apply only to anadromous and catadromous fish, and therefore do not apply to this project.

N/A = Go to C2

- 2) **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 run is extinct)?**

NO.

No = Go to C3

- 3) **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 C2a 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.

N/A = Go to C4

- 4) **If C3 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 4.a., has the applicant demonstrated, and obtained a letter from the U.S. Fish and Wildlife Service or National Marine Fisheries Service confirming that demonstration, that the upstream or downstream fish passage measures, if any, at the facility are appropriately protective of the fishery resource?**

N/A.

- 5) **Is the Facility in Compliance with Mandatory Fish Passage Prescriptions for upstream or downstream passage of riverine fish?**

N/A.

The applicant answered C5 as yes, due to fish passage provided by the USBR outlet from the dam, but since there are no Mandatory Fish Passage Prescriptions, we recommend that "N/A" is the appropriate answer.

If yes or N/A, go to C6.

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

YES.

FERC License Article 128 and amendment required agency review of fish screen design and operation at the Island Park Hydroelectric Project (FERC 1988a, FERC 1992a). In the initial FERC license application review, USFS and USBR submitted 4(e) conditions requiring the applicant to consult with USFS and

USBR on the plans for fish screen design and operation; these conditions were included in the FERC license. The applicant has complied with FERC and agency recommendations on the design and operation of the fish screen (USFS 2000c; USFWS 2000b; FERC 1999a; USFS 2000a; USFWS 1993; IDFG 1993). The USBR intake has no fish screen and fish are suspected of dispersing to the downstream reach from the reservoir (see discussion below). There have been no agency recommendations filed with respect to the USBR intake.

PASS.

Discussion

Although no anadromous or catadromous fish occur in the Facility area, a resident fishery thrives in both Island Park Reservoir and in the Henry's Fork of the Snake River downstream of the dam and powerhouse. The Island Park Reservoir is stocked with kokanee and rainbow trout. Although not migratory, rainbow trout from the reservoir are suspected of passing through the unscreened USBR intakes to disperse downstream through the USBR outlet tunnel into the Henry's Fork of the Snake River (Gamblin et al. 1993 as cited in Ecosystems Research Institute 1995). According to USBR (2001b), there have been no issues regarding entrainment or mortality of these fish due to the USBR intake structures. The trout fishery in the Henry's Fork of the Snake River is considered one of the finest trout fisheries in the country (USBR 2001). Wild rainbow trout comprise the principal gamefish. Other fishes present in this area include mountain whitefish, cutthroat trout, common carp, and suckers. Some hybrids of cutthroat and rainbow trout have also been observed.

D. Watershed Protection:

Criteria:

- 1) Is the Facility in Compliance with Resource Agency Recommendations, or, if none, with license conditions, regarding protection, mitigation or enhancement of lands inundated by the Facility or otherwise occupied by the Facility, or regarding other watershed protection, mitigation and enhancement activities?**

YES.

The following FERC license articles pertain to protection of the watershed:

Article 104: Annual consultation with USFS to ensure protection of natural resource values; Articles 108 and 131: Erosion control plans; Article 119: Revegetation Plan; Standard L-Form Article 19: Prevent soil erosion on project lands (FERC 1988a).

IDFG, USFS, and FERC inspections concur that the applicant has complied with these articles (USFS 2000; IDFG 2000a; FERC 1999a).

A Revised Forest Plan was adopted for the Targhee National Forest in 1997. Two management prescription areas are included in the Project Area. According to USFS, however, no specific goals have been determined for the project area other than general resource management (USFS 2001a). Although no prescriptions are related to boating or other water crafts on the reservoir itself, motorized vehicle use close to the water's edge is restricted. Since Island Park Reservoir was created for irrigation purposes by the USBR, no specific goals have been identified for watershed resource protection. The Revised Forest Plan mostly supports management for recreation. Monitoring efforts in non-campground areas are in place, but no specific efforts to minimize public use of the area have been considered (USFS 2001b).

Go to D2 for post-2002.

- 2) In order to maintain Low Impact Hydropower certification in the future, the Applicant must answer yes to any one of the following questions by January 1, 2002.**

The applicant did not address this question, but because the information is not required at this time, the applicant passes criteria (D) Watershed Protection. There is approximately 1,552 acres included in a 200-foot zone around the Island Park Reservoir. These lands are both privately- and federally-owned.

PASS.

E. Threatened and Endangered Species Protection:

Criteria:

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

YES.

In the EIS prepared for the installation of a rubber dam on the USBR dam spillway, the following species are discussed: *Endangered*-Bald Eagle, Grey Wolf; *Threatened*-Grizzly Bear (USBR 1995; USFWS 2000b).

If yes, go to E2.

- 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.

USFWS referenced the appropriate recovery plans when providing mitigation measures for the Biological Assessment (USFWS 2000b). No additional recommendations for the protection of endangered species have been requested (USFWS 2000a, FERC 1999a)

If yes or N/A, go to E3.

- 3) If the Facility has received authority 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 authority pursuant to similar state procedures; is the Facility in Compliance with conditions pursuant to that authority?**

N/A.

The Facility has not received authority to take a listed species.

If N/A go to E5.

- 5) If E2 and E3 are not applicable, has the Applicant demonstrated that the Facility and Facility operations do not negatively affect listed species?**

YES.

A Biological Assessment for the Bald Eagle was prepared at the request of the USFWS as part of the EIS. The BA concluded that the project would have no adverse effect on Bald Eagles. The BA also concluded there would be no adverse effect on the Grey Wolf and Grizzly Bear. Recent conversations with resource agencies concurred that there are no negative effects on listed species from Project operation (USBR 1995; USFWS 2000a; USFS 2000b; IDFG 2000b).

PASS.

F. Cultural Resource Protection:

Criteria:

- 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.

For the FERC-regulated part of the Facility (Island Park Hydroelectric Project), FERC license article 405 requires the applicant to consult with the State Historic Preservation Office before conducting any land disturbing activities, and describes protocol for action if any historic or archaeological properties are identified (FERC 1988b).

FERC inspections and IDFG concur that the applicant has complied with this article (FERC 1999a; IDFG 2000a).

- 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 of federal agency of *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?**

YES.

For the non-FERC regulated part of the Facility (Island Park Dam and Reservoir), the USBR and the Idaho State Historic Preservation Office determined that Island Park Dam was eligible for listing on the National Register of Historic Places, mainly because of its contribution to the historic development of northeastern Idaho. It was also determined that the construction of the hydropower plant would constitute an adverse effect upon the dam's historic integrity. To mitigate the adverse effect, the applicant completed large-format black and white photography to document the physical appearance of the dam prior to modification. The photographs are housed in the Library of Congress Historic American Engineering Record collection (FERC 1988b).

In addition, trout production in the Henry's Fork of the Snake River is an important cultural resource to the Shoshone-Bannock Tribes. The Tribes have requested monitoring temperatures both upstream and downstream of the reservoir to assess potential impacts of the Facility on trout spawning conditions (FERC 1988b). The Tribes are included in bi-annual Project Monitoring and Evaluation Committee meetings to review this monitoring data and develop target water quality criteria to better serve their cultural needs in the project area.

PASS.

G. Recreation:

Criteria:

- 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.

FERC license Articles 105 and 133 required the applicant to prepare a plan for accommodation of project-induced recreation (FERC 1988a). FERC inspections and USFS concur that the applicant has complied with these articles (FERC 1999a, USFS 2000a, USFS 2000b). Facilities provided by the applicant are located at or downstream from the dam.

- 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?**

YES.

Although the existing recreational facilities around the reservoir have not been provided by the applicant, three-fourths of the land around the reservoir is owned by the Forest Service, which provides recreational facilities, including direct road access to the reservoir. Two developed campgrounds are also maintained on USFS lands. Four dispersed sites (with limited facilities) are maintained. Three boat launching sites are located on USFS lands around the reservoir, and two County parks provide recreational facilities for visitors to the area.

If yes go to G3.

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

FERC inspections and USFS concur that the applicant has complied with this requirement (FERC 1999a, USFS 2000a, USFS 2000b).

The USFS provides fee-free access to the reservoir for day-use through a number of direct road access sites.

PASS.

H. Facilities Recommended for Removal:

Criteria:

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

NO.

There have been no recommendations for removal of the USBR dam (USDA Forest Service 2000b; USBR 2000b; USFWS 2000b; IDFG 2000b; nothing identified in FERC files review).

PASS.

RESPONSE TO PUBLIC COMMENTS

There were no public comments submitted on this application.

RECOMMENDATIONS:

Because the hydropower part of this project is a privately-owned FERC-licensed facility, and the dam and reservoir are owned and operated by the USBR, and are *not* FERC-licensed, in some cases, we needed to apply dual analyses to address the whole facility. Even considering multiple criteria, the Island Park facility meets the criteria to be certified, and we recommend to LIHI certification of the project.

FACILITY IS LOW IMPACT