

**REPORT SUPPORTING ENDORSEMENT AS A
LOW-IMPACT HYDROELECTRIC POWER FACILITY
FOR THE
ISLAND PARK HYDROELECTRIC PROJECT
FERC PROJECT #2973**

**PREPARED FOR:
FALL RIVER RURAL ELECTRIC COOPERATIVE, INC.
ASHTON, IDAHO**

**FEBRUARY 2000
AMENDED JANUARY 2001**

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FOR THE
ISLAND PARK HYDROELECTRIC PROJECT
FERC PROJECT #2973**

**PREPARED FOR:
FALL RIVER RURAL ELECTRIC COOPERATIVE, INC.**

**Prepared By:
Northwest Power Services, Inc.
P.O. Box 535
Rigby, Idaho 83442**

**February 2000
Amended January 2001**

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FOR THE
ISLAND PARK HYDROELECTRIC PROJECT
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Purpose:

This amended report is submitted as documentation that the Island Park Hydroelectric Project, FERC Project #2973 qualifies as an American Rivers "Low-impact Hydroelectric Power Facility". This report is organized to respond to eight key questions posed in American Rivers Certification Package dated October 21, 1999. Attached as "EXHIBIT C" is a copy of the agency comments in support of the Island Park Hydroelectric Project's Endorsement as a Low-Impact Hydroelectric Power Facility.

Background Information:

1. The name of the facility is the Island Park Hydroelectric Project.
2. The project owner and applicant's name is:

Fall River Rural Electric Cooperative, Inc.
Mr. Dee M. Reynolds, General Manager
1150 North 3400 East
Ashton, Idaho 83420
Phone: (208) 652-7431
Fax: (208) 652-7825

3. The project is located in Island Park, Idaho on the Henry's Fork of the Snake River, approximately 36 miles north of Ashton, Idaho.
4. The project was constructed with an installed capacity of 4.8 Megawatts.
5. The average annual generation for the Island Park Hydroelectric Project is approximately 28,250,000 kwh annually.
6. The Island Park Hydroelectric Project is operated under FERC License #2973 issued by the Federal Energy Regulatory Commission on October 19, 1988. The FERC License was issued for a period of 50 years with an expiration date of October 2038.
7. The Island Park Dam/Reservoir was constructed in 1920 by the U.S. Bureau of

Reservoir is still currently owned by the USBR and operated in conjunction with Fremont Madison Irrigation District.

8. The aeration basin, powerhouse and a small section of the buried penstock are located at the base of the Island Park Dam. This land is under the jurisdiction of the U.S. Forest Service and occupied by project facilities through a Special Use Permit issued to the licensee from the USFS, dated April 23, 1992. The total acres of Forest Service lands affected by project features is 1.2 acres.

9. The Island Park Reservoir is full at an elevation of 6303.00, with a surface area of approx. 8,084 acres.

10. The Island Park Dam/Reservoir is not a feature of the FERC License for the Island Park Hydroelectric Project. The Island Park Dam was constructed in 1939 by the USBR and the Island Park Hydroelectric Project was constructed in 1994 by Fall River Rural Electric Cooperative, Inc.. There is approx. 1,552 acres included in a 200 foot zone extending around the Island Park Reservoir. The ownership of these lands are both private and federally owned.

Fall River Rural Electric Cooperative, Inc. constructed the Island Park Hydroelectric Project on the Island Park Dam in 1994. Fall River is required to pay the federal government a falling water charge annually based on annual generation for the use of the federal facility (dam).

11. Please find attached as "EXHIBIT A" a partial list of contacts in the relevant Resource Agencies and in non-governmental organizations that have been involved in recommending conditions for the Island Park Facility.

12. Please find attached as "EXHIBIT B" a description of the facility and its mode of operation.

CERTIFICATION CRITERIA

A. Flows:

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

YES - The Island Park Hydroelectric Project is a run of the river facility utilizing only flows released from the Island Park Reservoir in cooperation with Fremont Madison Irrigation District and the U.S. Bureau of Reclamation. The Island Park Hydroelectric project does not release flows from the Island Park Reservoir at it's sole discretion.

The FERC License issued in 1988 for the Island Park Project does not require the licensee to provide a minimum flow release from the Island Park Dam. The hydraulic design of the Island Park Project is such that the minimum flow required to operate one of the two turbines is 170 cfs for any sustained period of time. Flow releases from the Island Park Dam since completion of the hydroelectric project have never been below the needed 170 cfs. In addition, flow releases from the Island Park dam have not been below 225 cfs since construction of the hydro project in 1994.

Flow releases below the Island Park dam are augmented by flows from the Buffalo River at the confluence with the Henry's Fork, which is approx. 1/4 mile downstream of the dam. Base flows of the Buffalo River are 200 cfs with the exception of higher flows during spring run-off.

The Licensee has no knowledge of any resource agency recommendation accurately detailing the flows required for fish and wildlife protection, mitigation or enhancement. All resource agency's comments were considered within the licensing process prior to the issuance of the FERC License in 1988.

As shown by the resource agency comments attached as "EXHIBIT C" the Island Park Hydroelectric Project meets the required flow conditions.

The Island Park Hydroelectric Project is operated as a run-of-the-river facility, at no time is the project operated as a peaking facility. Project operations rely on a continuous flow released from the Island Park Dam. In cooperation with FMID and the USBR, the licensee makes every effort to maintain flow releases in the range of 170 cfs to 960 cfs to optimize power generation and minimize seasonal flow variations.

In the fall of 1995, with approval from the U.S. Bureau of Reclamation, the project licensee modified the existing spillway located on the Island Park Dam, with the installation of an inflatable rubber collar (rubber dam). With the installation of the collar the licensee has the ability to mix water released from the bottom of the reservoir with water from the surface of the reservoir. This provides an opportunity to target desired water temperatures in the river below the dam given the water temperatures on the bottom and surface of the reservoir, in addition allowing the licensee to optimize power production. The overall flow releases from the dam continues under the direction of the USBR & FMID. Since the installation of the collar the licensee has been in compliance to all agency recommendations for target temperature criteria.

The Island Park Hydroelectric Project is required by Article 403 of its license to ramp any flow changes through the facility at no greater than 50 cfs per half hour. The licensee is in compliance with these ramping rate requirements.

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

In addition to Criteria A.1., the Licensee feels that the Island Park Hydroelectric Project also meets the criteria of A.3. by the Resource Agency's letters of support attached as "EXHIBIT C". As shown in the letter of March 22, 2000 from the Idaho Department of Fish & Game, they emphasized the following criteria: "Is the facility in compliance with resource agency recommendations...regarding flow conditions for fish and wildlife protection, mitigation, and enhancement...?". With an understanding of the project "the Idaho Department of Fish & Game endorses this project as a Low-Impact Hydroelectric Power Facility".

B. Water Quality:

1. Is the facility either:

a. In compliance with all conditions issued pursuant to a Clean Water Act Section 401 water quality certification issued for the facility after December 31, 1986? Or

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

YES - The Island Park Hydroelectric Project provides instantaneous water quality monitoring with hourly minimums, maximums and averages recorded at three locations. These locations are: X-1 - Reservoir bottom, X-3 - Aeration basin outlet, X-4 - Boat launch approximately 700 feet downstream. The monitoring equipment provides data on the following parameters: temperature, dissolved oxygen and total gas pressure.

The Island Park Hydroelectric Project is required by Articles 106, 107, 401 and 402 of it's FERC License to maintain oxygen levels at station X-4 above 7.0 milligrams per liter, total gas pressure not to exceed 110 % of saturation and water temperature to match temperatures released from the reservoir plus or minus 1 degree.

To meet compliance to this criteria the facility was constructed with a large aeration basin, a series of diffusers, air blowers and associated controls. As necessary, the aeration equipment is operated to provide adequate dissolved oxygen levels without exceeding total gas criteria. The licensee is also required to file an annual water quality report to the FERC to ensure compliance to these conditions.

In addition, in 1995 the licensee installed a rubber dam on the spillway located on the Island Park Dam. This allows the powerplant to utilize flows otherwise lost to run-off. This improvement allows for surface water to be mixed with low level releases to provide increased/decreased water temperatures, as conditions allow, for improved fishery conditions downstream as well as allowing the licensee the opportunity to optimize power production as water temperature conditions permit.

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

NO.

C. Fish Passage and Protection:

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?

YES - The facility is in compliance with mandatory Fish Passage Prescriptions for anadromous and catadromous fish because none have existed in the project area. Historically, Shoshone Falls on the Snake River, and Upper and Lower Mesa Falls on the Henry's Fork River have prevented any upstream migration of anadromous fish from occurring.

5. Is the Facility in Compliance with Mandatory Fish Passage Prescriptions for upstream and/or downstream passage of Riverine fish?

YES - The facility is in compliance with the Mandatory Fish Passage for upstream or downstream passage of Riverine fish due to the design of the existing U.S. Bureau of Reclamation outlet works on the Island Park Dam. These outlet works allow downstream movement of resident Salmonids. There has been no known recommendation from resource agency's for any additional fish passage facilities at the Island Park Dam.

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

YES - The Idaho Department of Fish and Game requested through license Article 128 that the projects retrofitted penstock be equipped with fish entrainment screens with 3/8 inch sized openings. This meets the states requirements for fish protection.

D. Watershed Protection:

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 licensee is in compliance to the following Article's within it's license:

Article 104 - Consultation requirements with the USFS to ensure natural resource protection.

Article 108 & 131 - Erosion Control Plan.

Article 119 - Revegetation Plan.

E. Threatened and Endangered Species Protection:

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

YES - There are a number of rare and endangered species (Bald Eagle, Grizzly Bear, etc.) present in the project area. A section seven consultation was done through the U.S. Bureau of Reclamation during the project licensing process. The biological opinion stated that the continued operation of the project would "not likely effect" any threatened or endangered species.

F. Cultural Resource Protection:

1. If FERC regulated, is the Facility in Compliance with all requirements regarding Cultural Resources protection, mitigation or enhancement included in the FERC license or exemption?

YES - The licensee is in compliance to Article 405 of it's license with respect to it's Cultural Resources Plan.

G. Recreation:

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

YES - The licensee is in compliance to Article's 105 & 133 with respect to it's Recreation Plan.

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

YES - The Island Park Hydroelectric Project in no way obstructs access to the reservoir or downstream boat launch's. There are several camp grounds and boat launch's located on US Forest Service lands at various locations around the reservoir. With completion of the hydroelectric project in 1994, improvements were made to the boat launch just downstream of the dam including public restrooms and an enlarged parking area.

H. Facilities Recommended for Removal:

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

NO.

**ISLAND PARK HYDROELECTRIC PROJECT
ADVISORY COMMITTEE MEMBERS**

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Brent Smith
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EXHIBIT B

Facility Description

PROJECT DESCRIPTION

Construction of the Island Park Hydroelectric Project began in September 1992 with completion in July 1994. The project was constructed on the existing Island Park Dam. Construction of the Island Park Dam was done in the late 1930's with completion of the dam in 1939. The Island Park Dam is currently owned by the U.S. Bureau of Reclamation.

The Island Park Hydroelectric Project is a run of the river project utilizing flows released from the Island Park Reservoir in cooperation with Fremont Madison Irrigation District and the U.S. Bureau of Reclamation.

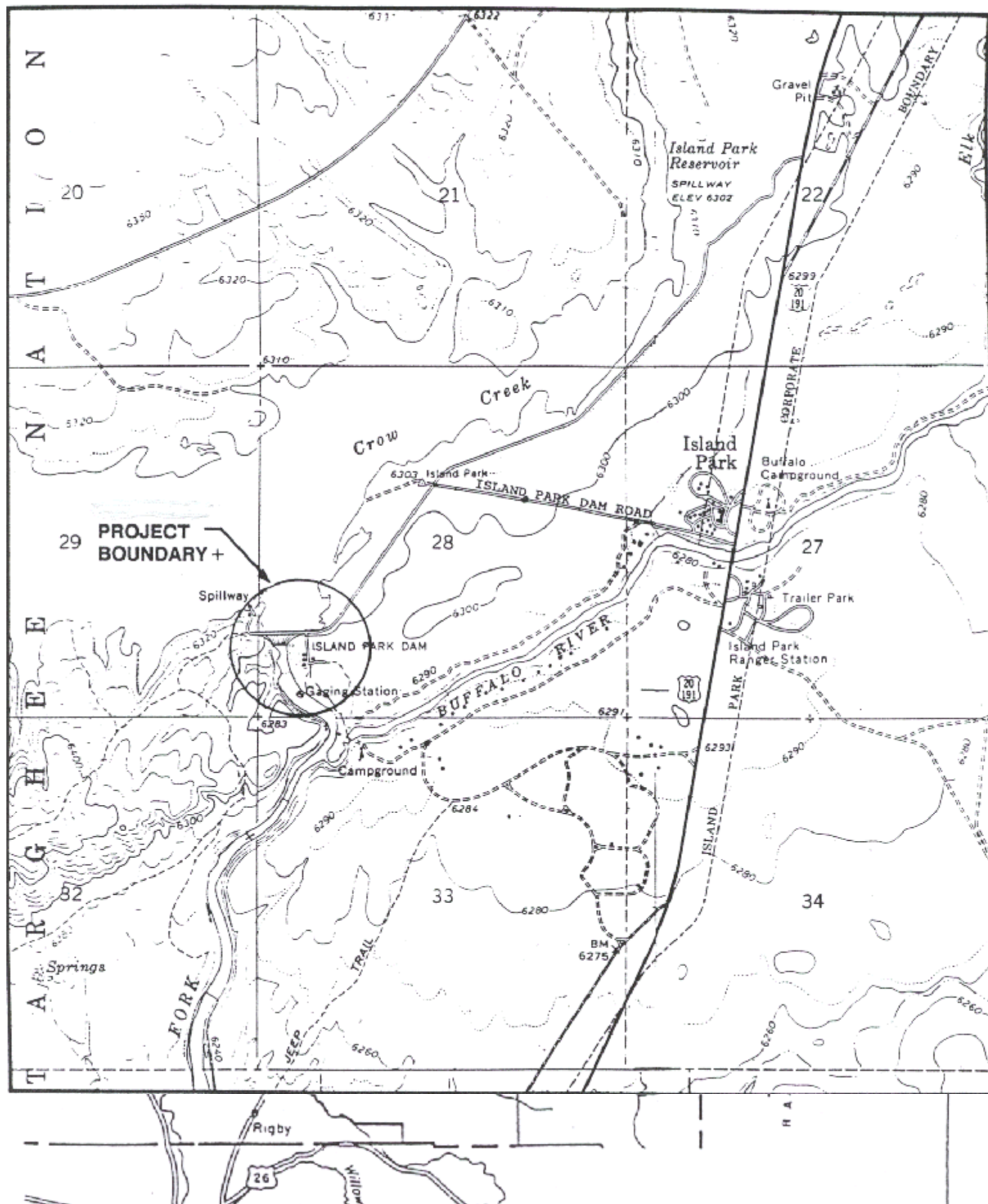
The Island Park Hydroelectric Project consists of a screened intake structure with 3/8 inch openings, approx. 720 feet of 10 ft. diameter penstock, a concrete/masonry powerhouse with two vertical Francis turbines/generators and associated controls, one 500 hp. centrifugal blower, one 250 hp. positive 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 Island Park Hydroelectric Project monitors water temperature, dissolved oxygen and total gas pressure at three locations. These locations are:

- X-1 - reservoir bottom
- X-3 - aeration basin outlet
- X-4 - 700 ft down stream from the project

The project is equipped with aeration blowers to provide additional oxygen to meet license criteria for downstream fisheries while monitoring total gas pressure.

In addition, in 1995 the existing spillway located on the Island Park Dam was fitted with an adjustable rubber dam. This rubber dam allows for mixing of water released from the bottom of the reservoir with water from the surface of the reservoir. This allows overall releases from the Island Park Reservoir to be mixed in an effort to optimize water temperatures for spawning just down stream of the dam.



**IDAHO FISH & GAME**

UPPER SNAKE REGION
1515 Lincoln Road
Idaho Falls, Idaho 83401-2198

Dick Kempthorne / Governor
Jerry Mallet / Interim Director

March 22, 2000

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

Subject: Island Park Hydroelectric Project (FERC No. 2973), Low-impact Hydropower Certification Program

Dear Brent:

Idaho Department of Fish and Game personnel have reviewed your Report Supporting Endorsement as a Low-impact Hydroelectric Power Facility (December 1999). This is our response to your request to review and comment on the report.

We believe Fall River Rural Electric has been an exceptional hydropower project operator. The licensee and their employees have routinely demonstrated a cooperative attitude in planning and operating the project to accommodate the needs of fish and wildlife and associated recreation.

With the report being revised to include our recommendations below, we endorse the project as a Low-impact Hydroelectric Power Facility. The changes we recommend should be easy to incorporate into the Low-impact application, and should not change the acceptability of the project as Low-impact.

It appears that the Low-impact application should be revised to 1) include the spillway modification as part of the hydroelectric project, and 2) report that the spillway modification project is in compliance with the certification criteria.

The report is written as if the hydroelectric facility is only comprised of features included in the 1988 FERC license. Since that time, the licensee proposed, studied, constructed, and has operated a modification (rubber collar) to the spillway of the U.S. Bureau of Reclamation's Island Park Dam. The spillway modification project, approved by Reclamation in 1995, would not exist but for the hydroelectric project. This issue is relevant because Criterion A includes the question: "Is the facility in compliance with resource agency recommendations ... regarding flow conditions for fish and wildlife protection, mitigation, and enhancement...?" The low-impact application

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reports that the hydroelectric project has no control over flow releases except for meeting ramping requirements. This was accurate prior to 1996. However, the spillway modification now allows control of the flow source during the spill period – either spill from the reservoir surface or hypolimnetic reservoir-bottom flow discharged through the hydropower penstock. These two water sources typically differ in temperature and nutrient content. Difference in water temperature at those two sources, and the new opportunity (provided by the spillway modification) to control the sources of discharged water, has led to recommendations from resource agencies for the protection and/or enhancement of fish and wildlife. Although these recommendations do not affect the overall quantity of flow from Island Park Dam, they directly relate to the sources of flows released under the control of the hydropower licensee. Therefore, it appears that the Low-impact application should be revised to include spillway modification project compliance with the Criterion A question of resource agency recommendations regarding flow conditions for fish and wildlife protection, mitigation, and enhancement.

To our knowledge, the hydroelectric facility operator has been in compliance with resource agency recommendations regarding flow conditions (Criterion A) to date, both for the project implemented under the 1988 license and for the spillway modification project implemented in 1996. To our knowledge, any noncompliance that has occurred was the result of accidents, emergencies, or factors beyond the licensee's control.

For the remaining criteria (B through H), we are not aware of any information that indicates either that the hydroelectric project is out of compliance with those criteria or that the report is inaccurate.

Therefore, with the spillway modification (rubber collar) being considered a hydropower project feature, the Idaho Department of Fish and Game endorses this project as a Low-impact Hydroelectric Power Facility.

Sincerely,



Don Wright
Regional Supervisor

Cc: Dee Reynolds, Fall River Electric
Natural Resources Policy Bureau, IDFG



United States Department of the Interior

FISH AND WILDLIFE SERVICE

EASTERN IDAHO FIELD OFFICE - ES

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CHUBBUCK, IDAHO 83202

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February 8, 2000

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

Subject: Certification of the Island Park Hydroelectric Project (Ferc Project #2973)

Dear Mr. Smith:

The U. S. Fish and Wildlife Service is writing in response to your request for comments related to the potential impacts to fish, wildlife, and rare plant species from the proposed certification of the Island Park Hydroelectric Project as a low impact hydroelectric power facility. This facility is at Island Park dam, Fremont County, Idaho. It is our preliminary determination that, given the general nature of the proposal, the project is unlikely to adversely impact any species listed under the Endangered Species Act of 1973, as amended. If you determine otherwise please contact me at the address or phone number listed above. Thank you for your interest in fish, wildlife, and rare plant species conservation.

Sincerely,

Michael J. Donahoo
Eastern Idaho Field Supervisor -ES

cc: Targhee National Forest, Pocatello
FWS, Boise



United States
Department of
Agriculture

Forest
Service

Ashton
Ranger
District

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

File Code: 2770

Date: February 10, 2000

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

Dear Brent:

We have reviewed the proposal for certification of the Island Park Hydroelectric Project, FERC Project #2973, as a low impact hydroelectric facility and agree this project should be viewed as a "Green" project. During our yearly reviews per article 104 we find the operations of the project are in compliance with license articles 108 and 131 Erosion control Plans, 105, and 133 Recreation Plans, and Forest Service special use permit clauses 1, 18, 19, 27 and 29 dealing with environmental and public service operations of the project.

Sincerely,

ADRIENNE K. KELLER
District Ranger



