Northwest Power Services, Inc.

ORIGINAL

July 22, 2005

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

Re: Buffalo River Hydroelectric Project, FERC Project #1413

Dear Ms. Salas,

For your review and approval, for the proposed construction activities at the Buffalo River Hydroelectric Project, FERC Project #1413, please find attached the following plans:

Recreation Plan (USFS Condition #10) – 045
Scenery Management Plan (USFS Condition #13) – 046

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

Sincerely,

NORTHWEST POWER SERVICES, INC.

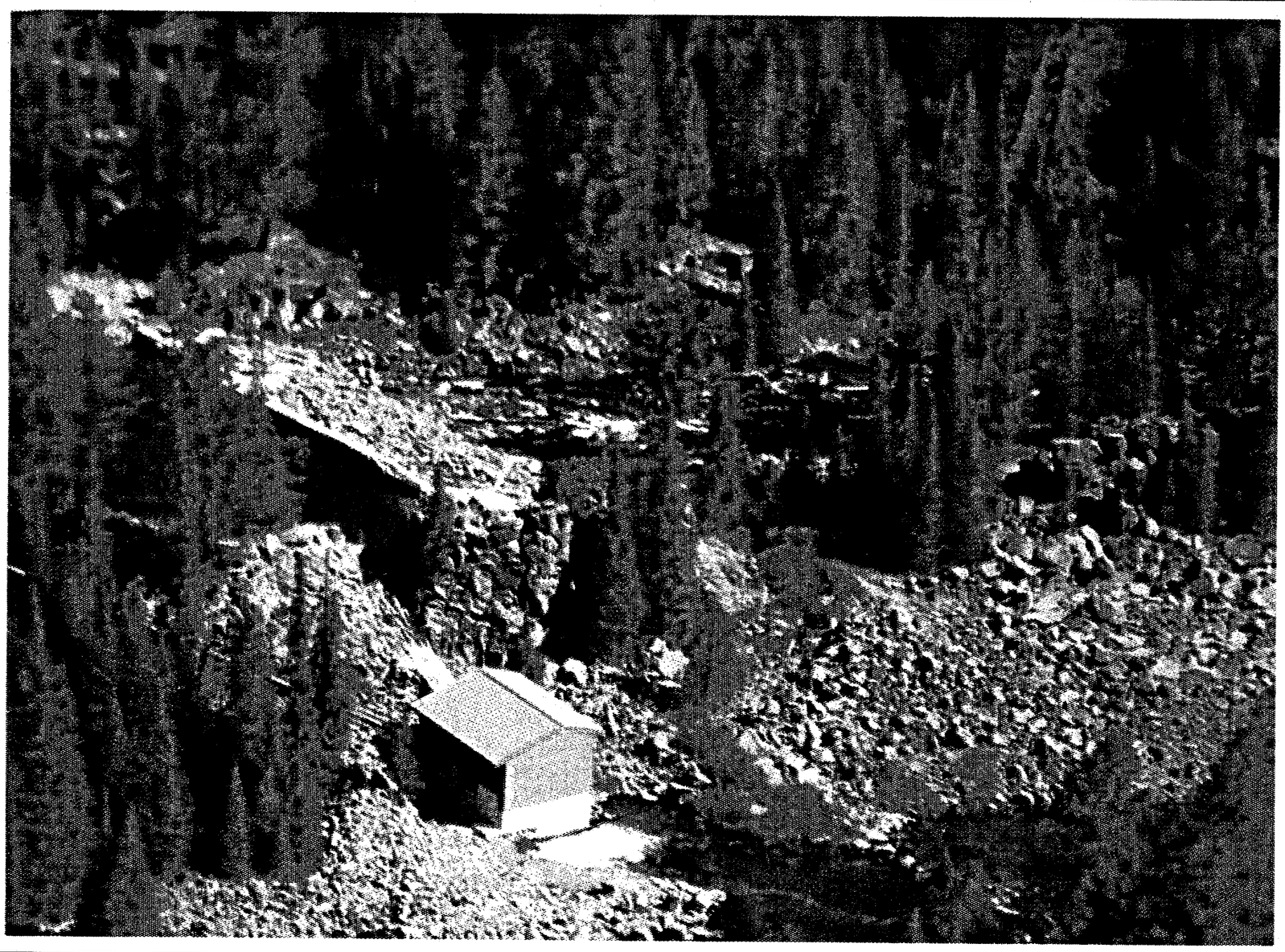
Brent L. Smith
President

cc: Mr. Dee Reynolds, Fall River Electric
Constantine Tjoumas, Director, D2SI, FERC - Washington
Harry T. Hall, Regional Engineer, FERC - Portland
Gary Vecellio, Environmental Staff Biologist, Idaho Department of Fish & Game
Gerrish Willis, Regional Hydropower Coordinator
Jim De Rito, Conseration Director, Henry's Fork Foundation
Steve Trafton, Executive Director, Henry's Fork Foundation
Lee Mabey, US Forest Service
Adrienne Keller, US Forest Service
Deb Mignogno, US Fish & Wildlife Service
Jim Esch, US Fish & Wildlife Service
Scott, A. Grunder, Fishery Program Coordinator, Idaho Department of Fish & Game
Troy Saffle, Idaho DEQ
Keith Hobbs, Idaho Department of Parks & Recreation

Buffalo River Hydroelectric Project

FERC Project #1413

Scenery Management Plan



Prepared for:

Fall River Rural Electric Cooperative, Inc.
Ashton, Idaho

Prepared by:

Northwest Power Services, Inc.
Rigby, Idaho

Ecosystems Research Institute, Inc.
Logan, Utah

July 2005

Buffalo River Hydroelectric Project

FERC Project No. 1413

Scenery Management Plan

Prepared for:

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

Prepared by:

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

Ecosystems Research Institute
975 South State Highway
Logan, Utah 84321

Scenery Management Plan

1.0 Introduction

A license was issued to Fall River Rural Electric Cooperative, Inc. (Fall River) in November of 2004 by the Federal Energy Regulatory Commission (Commission) for the alteration and continued operation of the Buffalo River Hydroelectric Project. The 250-kilowatt (kW) run-of-river project is located on the Buffalo River near its confluence with the Henry's Fork of the Snake River, north of Ashton, in Fremont County, Idaho. The license stipulates several terms and conditions which must be met with approval from various resource agencies. The purpose of this document is to describe the site specific effects the construction and operation of this project will have on the area's scenic resources. The document has been developed in response to Article #401 4(e) 13 and US Forest Service (USFS) Condition #13 of the license which states:

> ***Within one year of license issuance the licensee shall file with the Commission a Scenery Management Plan that is approved by the USFS. At a minimum, the plan shall address:***
>
> ***-Clearings, spoil piles, and project facilities including diversion structures, penstocks, pipes, ditches, powerhouse, other buildings, transmission line corridors, fish ladders, and access roads.***
>
> ***-Facility configurations, alignments, building materials, colors, landscaping, and screening.***
>
> ***-Proposed mitigation and implementation schedules necessary to bring project facilities into compliance with the Targhee National Forest Land and Resource Management Plan and provide protection of scenic value, one of the outstanding and remarkable values (ORV's) of the eligible Wild Henry's Fork. The plan will include measures to protect visual resources during construction that involve ground disturbance and vegetation removal.***
>
> ***-Mitigation measures shall include but not be limited to:***
>
> ***-Surface materials and colors of the exterior of the powerhouse***
> ***-Use of native plant materials to screen facilities from view***
> ***-Surface treatment colors and use of native rock on new concrete exposures***
> ***-Use of barrier rocks around parking area***
> ***-Reshaping and revegetating disturbed areas***

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

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

2.0 Existing Conditions

The visual quality objective for the Island Park area of the Targhee National Forest is retention (USDA-Forest Service, 1985). The Buffalo River possesses several outstandingly remarkable values (ORV's) upstream of the project including scenery, wildlife, fish, recreation and archaeology (USFS 2002). In addition, the Buffalo River has been identified as eligible for "Scenic River" status under the Wild and Scenic Rivers Act from its headwaters to Elk Creek and eligible as a "recreation river" from Elk Creek to the backwaters of the Buffalo River Hydroelectric Project dam. Therefore, the Buffalo and Henry's Fork Rivers are under consideration as "study rivers" for future Wild and Scenic River designation (USFS 2002).

3.0 Preservation and Enhancement of Scenic Values

The following design and construction methods will be implemented to minimize the visual impact from the project on the surrounding area.

3.1 Intake Structure and Fish Screens

The licensee proposes to construct a new concrete intake structure which would include the installation of fish screens and a mechanical screen cleaner. The intake structure and screen will be sunk near the bottom of the dam face where very little of the structure will be visible even at low water. The side of concrete intake will be covered with backfilled rock that will be the same type as the surrounding rocks.

The access areas disturbed during the placement of the intake structure, screens, and the construction of the coffer dam will be replanted with native vegetation as described in the

Vegetation Management Plan.

3.2 Sealing the Dam Face

The licensee proposes to seal the upstream face of the dam to reduce leakage. This process will visually alter the face of the current structure. However, very little of the structure will be visible even at low water. Steel sheetpiling will be used to seal the face of the dam. Stainless and galvanized steal will be avoided as requested by the USFS. The steel used will be prone to darkening and dulling over time. A 48 inch concrete maintenance walkway will be place on top of the existing concrete walkway to anchor the sheet piling. The concrete will be colored black to blend in to the rocks in the area.

Access areas disturbed during the sealing of the dam will be replanted with native vegetation as described in the Vegetation Management Plan.

3.3 Re-texturing the powerhouse

The licensee proposes to stucco the exposed concrete powerhouse structure. This will visually alter the appearance of the current powerhouse. However, a stucco color that closely resembles "Kodiak Black" will be used to blend the appearance of the powerhouse with the native lava outcrops in the project area.

3.4 Parking and Staging Area

Post construction improvements to the staging/parking area are intended to enhance the visual quality of the area. The area is currently denuded with no definitive boundaries. To improve this, large rock will be brought in to outline the parking area boundaries. Any areas outside of the rocked parking lot boundary that were disturbed during construction will be cleared of any spoil and construction material and replanted with native vegetation as described in the Vegetation Management Plan. Trees will be planted with consultation with the USFS as part of the Vegetation Management Plan. See attached site plans for the parking and staging area.

3.5 Fish Ladder

The final design of the fish ladder has been sent out for review and approval in a separate document. Part of the design is to have a rough trowel finish on top of the concrete wall, and rock like texture on the face of the walls that vary in depth up to the maximum depth of 4inches.

4.0 Summary

Efforts to preserve the visual character of the project have been embedded into the project design. The construction staging area is located in an area which has previously been disturbed. In addition, the scenic character of the construction, staging, and access areas will cease to appear visually altered once native vegetation becomes re-established.

5.0 Comments and responses

USFS April 21, 2005

USFS Comment 1

In general this plan is vague and will need more detail before it can be approved. We need to know what is going to be removed or added and how those changes may affect the appearance of the site. It may work well to incorporate this plan with the site plan requested in the Recreation Plan to provide a visual sense of what will occur. The revegetation plan is also a critical component of mitigation that should be integrated.

Response: As requested by the USFS the fishway is 270 feet long and will affect the appearance of the site. The fishway will not be seen from the Henry's Fork river, the parking area, the forebay, powerhouse, and much of the trail from the parking area to the dam. The fishway will be seen directly from below the dam/on the west side of the fishway. The fishway will also be seen from on the dam and downstream of the fishway for approximately 340 feet, however, do to the angle of view textures on the fishway will tend to blend together from these point of views. To lessen the visual affects of the fishway the following steps are proposed:

- Part of the fishway will double back on itself making the fishway's length 170 feet.
- Black coloring will be mixed throughout the concrete used on the fishway. The coloring will increase air entrainment and could weaken the structural strength of the concrete. However, the black coloring will help blend the fishway into the rocks in the surrounding area.
- Texture of the exterior of the fishway will be made to appear like rocks, with varying depth of up to 4 inches. These shapes are proposed to be between 6 to 12 inches from each other to prevent chipping of the concrete which is increased in probability of occurrence due to the black coloring. However, if the USFS requests the shapes to be placed closer with the risk of chipping and scaling of concrete the licensee is in agreement.
- Rocks will be backfilled in front of the fishway hiding some of the structure.
- Willows will be planted in front of the fishway hiding some of the structure and breaking up the lines created by a long fishway. Since the fishway is built on the edge of the river it is believed that space will be limited for suitable planting area.
- Grating will be placed on the fishway for the safety of the public and to limit predators and public access to the fish in the fishway. The grating will appear much like the grating on the existing fishway, dark and dull, over time.
- A rough trowel finish on top of the concrete wall.

To provide protection for the fish, a 1/4 inch opening fish screen has been proposed. The fish screen will be approximately 29 feet by 19 feet. To lessen the visual affects of this structure it is proposed that the following steps be taken:

- Grating will be placed on the structure to allow personnel to maintain the fish screen. The grating will appear much like the grating on the existing fishway, dark and dull, over time.
- The concrete structure will appear only 1 foot above the top of dam.

- Rocks will be added to the side of the structure, these rocks will be of similar type as those in the area. The elevation of the rocks will be nearly the same as the elevation of the structure, hiding the side of the concrete from view.
- Because of the large amount of debris in the Buffalo River a cleaner will be installed to keep the fish screen clean of debris thereby maintaining the required low flow velocities. Due to the uncommon situation of this site a cleaner has not be decided upon yet. However, the licensee will wait for USFS approval of the cleaner design prior to installation of the cleaner. The intake structure has been designed to fit any cleaner, the licensee anticipates that a cleaner design will be sent out for comments and approval by the end of June.

To provide access over the dam during the construction period rocks will be added to provide a more easily traveled path. These rocks will be of the same type and color as other rocks in the area. At the end of the construction period a 48 inch wide concrete path will be poured on the edge of the dam to provide an anchor to the sheet piling. The sheet piling will extend approximately 6 - 9 inches above the normal operating elevation of the forebay. The sheet piling will darken and dull over time. Visibility of the sheet piling will be limited due to the lack of access to view points of the face of the dam. No changes are proposed to the cliff on the north side of the intake.

USFS Comment 2

3.1 Intake Structure and Fish Screens

The plan should indicate what the concrete structure will look like in terms of surface treatment and color. The Forest recommends that the concrete be cast to resemble adjacent rock surfaces (to match the fish ladder structure) in terms of pattern, texture and color. All exposed concrete needs concrete dye mixed throughout. Please provide additional information regarding the height of the proposed mechanical screen cleaner or on its visibility from the Henrys Fork.

Response: The fishway will be colored and textured to match the surrounding rock outcrops. However, the intake structure will not be since the majority of the structure will be underwater or covered by rocks.

USFS Comment 3

3.2 Sealing the Dam Face

The steel sheet piles that are proposed need to be of a type of steel that will readily rust or darken to blend into the surroundings. Please provide details on how the top edge is to be finished.

Response: The sheet piling will darken and dull over time.

USFS Comment 4

3.3 Re-texturing the Powerhouse

It is our understanding that Kodiak Black is the color of the existing block powerhouse and that the exposed concrete will be stuccoed in a suitable color that blends the exposed concrete with the block and lava outcrops. In addition if practical, please add shrub, tree plantings or large rocks around the foundation to give a lower profile to the structure as well as hide some of the foundation.

Response: The licensee is in agreement.

USFS Comment 5

3.4 Parking and Staging Area

A site plan needs to be prepared and approved.

Response: Please see Figure 1 for the site plan.

USFS Comment 6

3.4 Fish Ladder

Alternative 1 as depicted in the final fish way design submitted March I I th is the preferred design. We have the following additional comments:

1. Match the color of the exposed concrete structure to the natural color of the surrounding basalt rock using dyed concrete for all visible surfaces.
2. Provide horizontal relief and texture (varied depth of the face of the wall on a large scale to make use of natural light and shadow) along the exposed vertical concrete surfaces as exists in the natural faces occurring in the area. Drawing number 2 depicts a 3" depth to provide texture in the wall. Depth should be varied across the face of the wall from as little as 3" to as much as 6" to take the most advantage of natural light and shadow to blend into the natural surroundings. Alternative 1 indicates a rough textured surface that is not obvious from drawing 2. The surface should contain as much texture as depicted in alternative 1.
3. Please provide random blocking along the vertical concrete surfaces to closely match the natural faces occurring in the area. The natural landscape in the river corridor is a combination of angular, irregular sized rectangular blocks and angular, irregular shaped boulders in a columnar and boulder arrangement. The final exterior of the fishway wall should be a combination of all of these elements: angular, irregular sized rectangular blocks, angular, irregular shaped boulders, a columnar pattern and a boulder like pattern matching the natural pattern behind the ladder.
4. The alternative I artist's rendition random relief pattern appears closer together than the 6" to 12" indicated in drawing 2. The artist's rendition is preferable than what appears to be wider spacing in drawing 2.
5. Please provide random vertical or edge relief along the top of the horizontal surfaces of the concrete to break up the visual line, similar in relief to surrounding natural surfaces. The top of the wall will be 7 ½" wide according to drawing 2 and still allow for steel grating. This 7" portion of the wall must be randomly broken up horizontally to eliminate the unnaturally straight line. Straight lines and angles, along with random heights and lengths along the top of the wall would be sufficient. Too much symmetry should not be incorporated so it does not appear like the top of a castle wall.
6. The north elevation of the ladder in drawing 2 does not show any of the random relief patterns overlapping the top edge of the wall. Overlapping should occur randomly (so only a portion of the boulder/block is created) to help mimic the natural environment.
7. Native rock removed during construction should be backfilled along the base of the fish way in the river to hide the foundation.
8. The river channel west of the fishway and south of the dam should not appear to be dredged clean of native materials. Native rock and debris should be placed back in the river after construction on the dam is finished.
9. The east side of the ladder needs to "hug" the bank/rock wall as much as possible. Then rock can be placed behind and up to the top of the ladder wall. It will tie the ladder into the existing landscape and look much more natural from all viewing angles.
10. If feasible willow plantings and other shrubs could be planted in between the rocks next to

the walls. This would help break up the long flat horizontal surface of the wal s.

Response 1: The structure will be colored and textured to match the surro nding rock outcrops.

Response 2: Depth can not exceed 4" or the strength of the concrete wall will be compromised. Texture will be added inside of each shape.

Response 3: The licensee has proposed backfilling behind the ladder with rocks displaced during excavation in order to mimic the surrounding area's visual setting.

Response 4: The licensee is in agreement. However, bringing them closer together will increase the potential for edge chipping and scaling of the concrete due to the black coloring and nature of concrete.

Response 5: Changing the top of the concrete wall will have negative affects on the ability to grate the top of the fishway. Grating the fishway provides predator protection for the fish and safety to the public. The greatest visual benefit of changing the top of the concrete wall, by height differences, will be realized when facing the wall from the Buffalo River perpendicular to the fishway. This area is relatively small and inactive in use when compared to other view points, for example the top of the dam. From the view point on top of the dam the fishway will be viewed at an angle. These changes in height, of the top of the concrete wall, will result in a visual effect of a concrete slab extending vertically above the water surface in the fishway and grating could not be installed. Instead of a visual affect of rocks it will appear as a black concrete slab from this point of view, which is the most common and accessible view point at the site. Since most of the view points within and around the project boundary will not even see the fishway and of those view points that can view the fishway it is likely to have a negative impact visually due to these height differences; and since fish and public safety could be effected it is proposed by the licensee not to include these height differences to the top of the fishway. A rough trowel finish on top of the concrete wall will be used.

Response 6: The proposal is to use the existing fishway which does not have any rock like texture. This existing fishway is within the concrete spillway and has been in place for over 10 years and therefore no scenery changes are proposed.

Response 7: The licensee is in agreement.

Response 8: The licensee is in agreement.

Response 9: The licensee is in agreement.

Response 10: The licensee is in agreement.

LARGE-FORMAT IMAGES

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

For Large-Format(s):
Accession No.: 20050727-0156

Security/Availability:

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File Date: 7/26/05 Docket No.: P-1413

Parent Accession No.: 20050727-0185

Set No.: 1 of 1

Number of page(s) in set: 3

Correspondence on Plan

United States Department of Agriculture | Forest Service | Caribou-Targhee National Forest | 1405 Hollipark Drive Idaho Falls, ID 83401 208-524-7500

File Code: 2770
Date: April 7, 2005

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

Re: Buffalo River Hydroelectric Project, FERC Project #1413

Dear Brent:

The USDA Forest Service has received for review and comment several plans submitted by Northwest Power Services, Inc. These plans are required by the Buffalo River Hydroelectric Project, Federal Energy Regulatory Commission (FERC) Project # 1413 License issued November 5, 2004. These plans are dated March 11-23, 2005 and request comments within 30 days. As identified and agreed upon in your telephone conversation with Lee Mabey on March 30, 2005, the USDA Forest Service will review all of these plans and provide one response to Northwest Power Services, Inc. by April 23, 2005, which is 30 days from the date the last plan was submitted.

If you have any questions or need additional information, please contact Lee Mabey, Team Leader at (208) 557-5784.

Sincerely,

JERRY B. REESE
Forest Supervisor

cc: Ms. Magalie R. Salas, Secretary, Federal Energy Regulatory Commission, 888 First Street N.E., Washington, DC 20426

IDAHO FISH & GAME
Upper Snake Region
4279 Commerce Circle
Idaho Falls, Idaho 83401

Dirk Kempthorne / Governor
Steven Huffaker / Director

11 April 2005

Brent Smith
President, Northwest Power Services Inc.
PO Box 535
Rigby ID 83442

RE Buffalo River Hydroelectric FERC #1413 Article 406 Condition 14 Fish Screen, and Article 405 Fishway Design:

Dear Brent:

Idaho Department of Fish and Game (IDFG) has reviewed the above referenced letters and accompanying diagrams. IDFG has been involved in FERC #1413 re-licensing and associated articles of the license since the process' inception. We are in receipt of letters and engineering drawings for (1) the proposed fish screen mechanism as required in article 406, letter dated March 22, 2005 and (2) the proposed fishway design as required by article 405, letter dated March 11, 2005.

Fish Screen Mechanism, Article 406:
We support the intake and fish screen as proposed in the drawings. We believe that the intake section of the screen, and the ¼ inch design openings, will serve to protect all but the very smallest of fish from passing into the turbines. Other documents relate to the estimated 0.8 feet per second approach velocity of the water going through the intake screen. This velocity should serve to protect all but the smallest of fish from becoming impinged upon the intake screen. The dimensions and estimated water velocities approaching the screen are acceptable to us.

We understand that the re-licensing process necessitates monitoring of this intake screen. We are unsure at this point, how the screen will be cleaned and are accepting that it will somehow occur manually. That is, no additional hardware, or grates will be attached to the screen mechanism. We would like to see the proposed method of cleaning the intake screen, the schedule it might occur, and any conceptual plan you might have for monitoring fish impingement.

Fishway Design, Article 405:
IDFG staff has worked in conjunction with your staff and consultants, and with those from the U.S. Forest Service, and the Henry's Fork Foundation to develop the best design possible given the conditions under which this fishway must be built and function. We believe that together, we have provided recommendations resulting in a design with an excellent likelihood of functioning successfully. We are satisfied that you have provided ample opportunity for IDFG to review and consult in the design phase, and you have recommended a final design acceptable to us.

It will be critical to monitor construction of the fishway to assure that slopes, pool sizes, pool width/length ratios, and all other design features are constructed appropriately. To this end, we anticipate having our Environmental Staff Biologist Gary Vecellio observe construction as the plan becomes a reality. We also hope you will invite others who helped in this design, and hope you have retained the services of the engineering firm (Sunrise Engineering Inc.) responsible for the drawings to monitor fishway construction.

We are concerned that several very specific design recommendations actually appear in the final product. Critical design features include:

- Pool width/depth ratios of 1:1 or larger. Each pool must be as long, or longer than it is wide to reduce the likelihood of patterns of turbulence within and among pools.
- Wing walls where the water inside the fishway turns 180 degrees must be angled at 45 degrees as shown in sheet number 4.
- Piping for the auxiliary water flow is critical to fishway efficiency. The additional flow provided at the valve box near the downriver end of the fishway must be angled parallel to the outflow of the fishway,
- It is critical that the entrance pool (large drawing, sheet 10) of the fishway (for fish moving upstream) be located in the existing natural pool of the Buffalo River. The pool lengths and fishway total length is designed to utilize this natural resting pool for fish to begin swimming into the fishway.
- Rock to be used to line the floor of the fishway must be rounded river rock, not angular broken basalt. These should average 4" to 6" mean diameter (sheet 4).
- Baffle boards installed between pool sections are to be designed specifically as shown in Drawing C, Sheet 5. To achieve both streaming and plunging flows within the fishway, we anticipate needing this specific design. The orifice within the baffle board sections should initially be placed opposite (not below) the notch in the top baffle board (drawing C, Sheet 5).
- It is critical that the design is able to be modified post-construction. By this we mean that the baffles will be able to be removed, replaced, and changed in design and orifice location. This will necessitate that slots are used to place these baffle boards (drawings C & E, sheet 5).

We are concerned that you may need to engineer and construct some form of cage, or cage-holding mechanism at the upstream end of the fishway for use in your monitoring program. This is not shown in your drawings. Also, is additional engineering necessary to de-water the fishway for moving or replacing baffles. Should drawings of the mechanisms needed to dewater the fishway accompany this package?

IDFG supports your plans and engineering for the fish screen and fishway. We believe that the designs and engineering approaches taken will be likely to allow upstream and downstream passage of salmonids down to 100mm in length. We appreciate being an integral part of the design process for these components. We believe you have entirely complied with FERC requirements within Articles 405 and 406 to provide consultation to IDFG in these phases.

If you have any questions, please contact our Environmental Staff Biologist Gary Vecellio at 525-7290.

Sincerely,

R.J. Saban

Robert J. Saban
Regional Supervisor

RJS:gmv

Cc: Natural Resource Policy Bureau, IDFG
Phil Jeppson, IDFG Engineering
Fisheries Bureau, IDFG
Jim Fredericks, IDFG
Lee Mabey, USFS
Jim DeRito, HFF
Scott Christensen, GYC

IDAHO FISH & GAME

Upper Snake Region
4279 Commerce Circle
Id Idaho Falls, Idaho 83401

Dirk Kempthorne / Governor
Steven Huffaker / Director

13 April 2005

Brent Smith
President, Northwest Power Services Inc.
PO Box 535
Rigby ID 83442

RE Buffalo River Hydroelectric Project, FERC 1413, Construction Plans:

Dear Mr. Smith :

Idaho Department of Fish and Game (IDFG) has reviewed the above referenced report and plans, consulted with the U.S. Forest Service (USFS) and several non-governmental entities, and we submit the following comments for your consideration. IDFG has been involved in FERC #1413 re-licensing and associated articles of the license since the beginning. The construction plans cover 11 sections pertaining to FERC #1413, including Fishway and Fish screen monitoring plan (Article 407), Public Safety Plan (Article 410, and USFS Condition #15), and Recreation Plan (USFS Condition #10).

Fishway & Fish Screen Monitoring Plan (Article 407), Section D:
As noted in our letter dated 11 April 2005, we support the intake and fish screen as proposed in the drawings. We also support the fishway diagrams with consideration to our comments of 11 April 2005.

Section 2.1 Fish Screen Monitoring states that the approach velocity of water toward the fish screen will be 0.8 feet per second. We request that basic measurements be made to establish this approach velocity upon plant operation. Further, we request that you attempt to document a zero 'sweeping' velocity along the fish screen.

Section 2.2 Fish Ladder Monitoring- Please provide a diagram or engineering drawings of the fish trap to be used in monitoring upstream fish use of the fishway. We recognize that the drawing may be conceptual at this point. We request that the monitoring project be designed to verify that downstream fish passage through the fishway occurs as well as upstream fish passage. We recognize that the majority of flow, and presumably fish, will wash downstream via the overflow.

Please state that you will allow access to IDFG, and the U.S. Forest Service (USFS) to all fishway facilities and screens in order to monitor conditions. We intend to take flow measurements within the fishway at varying water levels in hopes of achieving the best fish passage conditions possible by altering baffle shapes and orifice positions if necessary.

Diversion Operation Plan, Article 410, Section E:
Please comment on your need to remove sediment from the forebay of the project in the past. Your statement that it will not be necessary may be correct. But, if sediment removal is necessary due to an upstream event, we would like your plans on how it will occur.

Under Procedures for flood conditions, you state that you intend to "pull the stop logs increasing flow through the dam spillway" if this becomes necessary. IDFG requests that, should this occur, you closely monitor for changes in the streambed at the downstream entrance to the fishway and below. The fishway is designed to begin at a critical pool along the upstream migration path. If pulling stop logs to increase flow through this section occurs, we need to ensure that the stream channel is monitored for alteration. If the fiswhay entrance pool is changed or destroyed, or the fishway entrance conditions altered, IDFG needs assurance that it will be reconstructed. Your procedures for flood conditions must incorporate monitoring of the channel from the fishway entrance downstream at least 50 meters.

Public Safety Plan, USFS Condition #7, Section F:
You claim that the river corridor between the highway 20 bridge and the hydropower backwaters is "a very low use recreational area". We do not agree, but suggest that fishing is an important recreational use in this area. Other uses such as skiing and waterfowl watching are also popular. We suggest that the primary factor keeping fishing use lower than what might be expected is a lack of access along this section of river. The Buffalo Summer Home area on the south river shore detracts from the public accessing the river corridor along the most frequently traveled shore (Forest Road 136). We suggest that the hydropower facility owners consider cooperative efforts to increase recreational access to this river from the southern shore (see next section).

Exhibit B shows approximate locations of "Danger-No Boating or Swimming Beyond this Point" signs. We would like to know the rationale for the location of these signs. Are there conditions in your FERC license stating that these signs are placed a specific distance from the dam? Are these *recommendations or regulations given to you in your Special Use Permit by* the USFS? We would like you to consider and report what is necessary (by law or permit condition) in terms of this signage. If this signage is entirely voluntary, then we would like to cooperatively re-consider what boating usage may be reasonable and safe in the forebay above the dam.

Recreation Plan, USFS Condition #10, Section G:
This section addresses, in part, "future development or rehabilitation of recreation facilities or sites". We request that the facility owners/operators cooperate with IDFG, Idaho Department of Parks and Recreation, and the USFS and consider building a non-motorized boating access in the backwaters of the facility. This river corridor is, in our opinion, not appropriate for motorized boating. However, it is designated by the USFS as "Eligible Recreational River" from the confluence of Elk Creek to the forebay of the hydropower project.

IDFG believes that quality recreational fishing and wildlife watching opportunities would perhaps be opened by allowing people to take out canoes or personal non-motorized watercraft such as pontoon boats near where the "Danger-No Boating" signs now are. Canoes and personal non-motorized watercraft would be able to enter the river either at the USFS fishing peir, USFS

campground, or Highway 20 bridge for a leisurely and youth-friendly fishing and floating experience. This would necessitate a landing and path to take their boat out near the parking area at the end of Riverside Drive. We believe that the groups should cooperate and explore this possibility as part of your recreational plan.

We understand that operators of the hydropower facility are perhaps the primary users of the USFS road on the northern shore of the Buffalo River below the Highway 20 bridge. Please disclose any plans you have to gravel, grade, harden or upgrade this road for access to your facility which may be used by the public.

Thank you for the opportunity to comment on this document. If you have any questions, please contact our Environmental Staff Biologist Gary Vecellio at 525-7290.

Sincerely,

R. J. Saban
Regional Supervisor

RJS:gmv

Cc: Natural Resource Policy Bureau, IDFG
Adrienne Keller, USFS
Lee Mabey, USFS
Jim DeRito, HFF
Scott Christensen, GYC
Mary Lucachick, IDPR

STATE OF IDAHO
DEPARTMENT OF
ENVIRONMENTAL QUALITY

900 North Skyline Dr., Suite B • Idaho Falls, Idaho 83402-1718 • (208) 528-2650

Dirk Kempthorne, Governor
Toni Hardesty, Director

April 20, 2005

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

RE: BUFFALO RIVER HYDROELECTRIC PROJECT (FERC # 1413) CONSTRUCTION PLANS

Dear Mr. Smith:

The Idaho Department of Environmental Quality (IDEQ) has reviewed your construction plans, dated March 16, 2005. We would offer the following comments and suggestions:

General Comments
All in-stream excavation should be conducted in a manner which minimizes sediment transport and turbidity. This can be accomplished through effective use of best management practices (BMPs), timing, and precise excavation.

Specific Comments
Section 3.1.1. The temporary storage area should be separated from the river with silt fence or suitable erosion control best management practice.
Section 3.2.1. The turbidity of the river below the location of the coffer dam and removed water shall not exceed state water quality standards (see IDAPA 58.01.02 for details). Real time monitoring should be reviewed during the activity so that construction or pumping activities can be curtailed if necessary.

In addition, IDEQ will not be issuing any addition water quality certifications for the construction outlined in the plan. The November 28, 2003 water quality certification issued by this office covers the construction activities detailed in your construction plans.

If IDEQ can clarify any of our comments or can be of addition assistance, please do not hesitate to contact me at 208.528.2650 or tsaffle@deq.idaho.gov.

Sincerely,

Troy Saffle
Regional Water Quality Manager
Idaho Falls Regional Office

c: James Johnston, Regional Administrator
Gary Vecellio, IDFG
Lee Mabey, USFS

IFRO

30061

United States Department of Agriculture | Forest Service | Caribou-Targhee National Forest | 1405 Hollipark Drive Idaho Falls, ID 83401 208-524-7500

File Code: 2770
Date: April 21, 2005

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

Re: Buffalo River Hydroelectric Project, FERC Project #1413

Dear Brent:

The USDA Forest Service has received for review and comment several plans submitted by Northwest Power Services, Inc. These plans are required by the Buffalo River Hydroelectric Project, Federal Energy Regulatory Commission Project No. 1413 License issued November 5, 2004. These plans are dated March 11 to 23, 2005 and request comments within 30 days. As identified and agreed upon in your telephone conversation with Lee Mabey on March 30, 2005 and documented in my letter to you dated April 7, 2005, the USDA Forest Service has reviewed all of these plans and is providing one response to Northwest Power Services, Inc. by April 23, 2005, which is 30 days from the date the last plan was submitted.

Detailed Forest Service comments on the attached plans are included within Enclosure 1. A total of twelve plans were submitted and the Forest Service is approving eight of the twelve plans with some edits (see Enclosure 1). The plans which are not approved include the Construction, Recreation, Safety and Scenery Plans. It is anticipated that Forest Service comments will be addressed in all the plans and additional details (as requested in Enclosure 1) will be provided to the Construction, Recreation, and Scenery Plans prior to them being resubmitted for approval.

We appreciate the opportunity to review and comment on these plans and look forward to working with you on the approval of the Construction, Recreation, and Scenery Plans.

If you have any questions or need additional information, please contact Lee Mabey, Team Leader at (208) 557-5784.

Sincerely,

JERRY B. REESE
Forest Supervisor

Enclosure

cc: Ms. Magalie R. Salas, Secretary, Federal Energy Regulatory Commission, 888 First Street N.E., Washington, DC 20426

Enclosure 1
Comments on Buffalo River Hydroelectric Project (P-1413) Plans

Condition No. 1 - Approval of Final Design (Article #401)

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

The Forest has received for approval stamped engineering plans for the intake structure and screen, fish ladder, and sheet piling. The fish ladder will be commented on under Article 405 Upstream Fishway Design Drawings and under Condition No. 13 Scenery Management Plan.

We offer the following comments on the Final Design Plans and Specifications:

- The sheet piles placed around the dam structure are supposed to be grouted in place using a tremie. It is important that the tremie be positioned as close to the point of placement as possible to avoid segregation of the grout as it passes through the water. A note in the specs or plans would be appropriate.

- The Erosion Control Plan Section 3.2 indicates that continuous turbidity monitoring will take place during construction of the intake, grouting sheet piles, construction of fish ladder, and removal of coffer dam. There does not appear to be any mention of turbidity monitoring in the plans or specs. There should be a spec indicating the required type of sampling device, max turbidity, and action to take if levels are exceeded. Monitoring of pH levels is recommended during the grouting process (see Erosion Control Plan comments).

- The Erosion Control Plan Sections 3.2.7 and 3.2.8 indicates the use of erosion control devices such as silt fence and straw bales to limit the intrusion of sediment into the river. There is no mention of erosion control in the plans or specs, therefore, it is recommended that the required erosion control devices and placement be included in the plans and specs.

- There is a lack of detail in the construction plans which do not allow a full determination of how changes due to project construction may impact or change

recreational access or affect scenic values. For example the rocky cliff area between the intake and the powerhouse is likely to be modified to provide a safer access to the screen, dam and fish ladder facilities, however, there is no acknowledgement or description of these changes identified. Previously there was mention of a self cleaning mechanism for cleaning the intake screen yet no detail has been given. In addition the construction of the access across the dam is not described. In earlier conversations we discussed the need that rock used to create a flat driveable surface across the top of the dam needed to be similar in color to the existing rock. We also provided information regarding a possible pit source on the Forest where arrangements could be made to secure the needed rock.

- Plans need to show full detail of fish ladder exit or water entrance.

At this time without full detail it is not possible for the Forest to approve these plans or predict the full impacts of this project on other items of concern to the Forest.

Condition No. 16 - Erosion Control Measures Plan (Article # 302 - Section A of Construction Plans)

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

We have the following comments regarding Section A of the Construction Plans:

General Erosion Control Measures

3.1 – 1 The Forest requests that the staging area be moved to an approved location southwest of the proposed staging site. The staging area needs specific locations to be identified for spoil storage, a hazardous materials storage area and a concrete cleaning area to avoid unnecessary site impacts. The plan needs to state specifically that the area outside of the staging area will not be used. The edge of the spoil piles needs to be at least 50 feet away from the slope break near the edge of the trees not 50 feet from the river. The hazardous materials need to be located at least 150 feet from the river. A suggestion would be to place it in the southeast corner of the staging area. The staging area needs to have a silt fence or equivalent between it and the river. Restoration of the staging area needs detailing in the Revegetation Plan.

3.1 - 2 It is stated that disturbances beyond permanent roads and parking areas will be revegetated. Treatment of access roads, project roads and parking areas need to be defined and approved in the recreation site plan, Road Use Permit and Special Use Permit. A recreation site plan has not yet been prepared (see comments under Recreation Plan). The Erosion Control Plan should state the specific page and section in the Vegetation Management Plan that addresses how areas will be revegetated.

3.1 – 4 Practices to confine, remove and dispose of excess concrete, cement, and other mortars or bonding agents, including measures for washout facilities needs to be incorporated. A silt fence or equivalent needs to surround the cleaning area. Any waste materials deposited during the cleaning process are to be removed and disposed of properly. Runoff into the river is not permitted. Equipment cleaning needs to be done at least 50 feet away from the slope break near the edge of the trees.

3.1 -5 The Forest requests that decomposable fiber mats are replaced by hydro mulch as hydro mulch is less susceptible to impacts by animals that sometimes get entangled in fiber mats. If straw or straw bales are used they shall be certified weed free. Figure A-3 shows an access road in red to the dam with no explanation of surfacing or how it will be made passable nor does the Vegetation Management Plan provide details concerning its restoration. No detail is given on the concrete truck access, the more native soil that can be left in place the easier site restoration will be.

3.1 -7 The agreement and terms of use for the Riverside Road access road will be covered under the Road Use Permit Condition # 8.

In general sediment and erosion control should include project perimeter controls such as silt fencing, fiber wattle barriers and/or dikes, and ditches, as needed. To the extent practicable, best management practices (BMPs) will be used to contain, control and screen stormwater from entering the river and associated wetlands and/or riparian areas. Inside the perimeter protection, BMPs will be used to limit and control the velocity of water running over and through the construction site to limit the amount of sediment picked up by stormwater. This will include placing check dams or channel liners in drainage channels, covering high use areas with coarse materials that will allow water infiltration but resist erosion and prevent rutting and mud puddles from forming during storms.

Construction of the New Intake Structure

3.2.1 How and to what degree will the existing rock outcrop in the area by the intake be modified? Incorporate state standards for turbidity as listed in 4.2 if standards are exceeded work should be halted until turbidity can be minimized to acceptable standards.

Water pumped from any in-river excavation or other disturbances should not be placed into any waterbody until it meets Idaho Department of Environmental Quality (IDEQ) water quality standards. The water should be land applied to suitable uplands or stored in settling basins that are large enough to treat all pumped water.

Sealing the Upstream Face of the Dam

3.2.2 Incorporate state standards for turbidity and pH as listed in 4.2 if standards are exceeded work should be halted until turbidity or pH can be minimized to acceptable standards. Cleaning of concrete and grout implements needs to be done at least 50 feet away from the slope break near the edge of the trees and within the confines of a defined area within the staging site. Waste and residue from the cleaning site must be removed and disposed of properly offsite.

Pre-Construction Excavation
3.2.3.1 Include state standards listed in 4.2, if standards are exceeded work should be halted until turbidity or pH can be minimized to acceptable standards. Rock generated by construction activities, such as fishway shelf excavation, may be used for construction purposes. Use of native rocks, such as rocks within the stream channel or dam face, for construction purposes is prohibited. Disturbance to the stream channel should be addressed so that at the end of the project the area looks much like it did at the beginning of the project while insuring the fish ladder functions appropriately.

Construction of the Fish ladder
Berms need to be removed and the area left in a manner that the aesthetics are preserved and the fish ladder functions appropriately. Include state standards for turbidity and pH listed in 4.2 of which if standards are exceeded work should be halted until turbidity or pH can meet state standards.

Staging Area
3.2.7 Hydro mulch is preferred over fiber mats (such as excelsior rolls with plastic mesh) since the plastic mesh is an entanglement hazard for people and wildlife.

Dam Access
3.2.8 Restoration of this area needs to be done in coordination with the site plan. Hydro mulch is preferred over fiber mats.

Construction Area
4.1 Specify certified weed free straw will be used as identified in the revegetation section.

Buffalo River Water Quality
4.2 The Idaho DEQ standard for pH of 6.5-9.0 needs to be incorporated. The lower monitoring site should be within the Buffalo River proper above the confluence with the Henrys Fork. Field monitoring should be done with field calibrated equipment so if standards are exceeded, construction can be stopped immediately and construction methods can be evaluated and changed to ensure standards are met. Any violations along with changes made to avoid further violations shall be reported within one day of the occurrence to the designated Forest Service Inspector and Troy Saffle of Idaho DEQ. Any resulting fish kills and there extent (although not expected) shall be reported immediately to Idaho Fish and Game and the Forest Service. All state standards need to be met.

It is not sufficient to provide continuous monitoring and then report violations post construction. Field monitoring is recommended during times likely to create problems such as: the initial dewatering and building of cofferdams, sheet pile placement and fish ladder construction. Field monitoring of pH is needed during grouting procedures and cement work. The Forest recommends an additional monitoring site or at least grab samples be taken in the immediate discharge area or point of impact.

Upon incorporation of these comments this plan is considered approved.

Temporary Emergency Action Plan (Article #304 - Section B of Constructio n Plans)

The Forest accepts this plan as written.

Hazardous Substance Plan (Article #404 – Section C of Construction Plans)

2.1 Hazardous Substances to be on Site
Please add: fueling of equipment will occur at least 150 feet from any stream wa erbody, except for equipment that is permanently stationed (*i.e.*, crane) or onsite pumps t nat are continuously running. In these instances precautions will be taken so if spilled, fuel will be contained and contamination prevented. Machinery and implements that are used during the project will be in good repair, and free of excessive leaks. When char ging hydraulic lines, care will be taken to keep hydraulic fluid from entering any wate rbody or soils. It is recommended as a preventative measure that refueling in the staging area be done within a containment cell.

2.2 Storage and Containment of Hazardous Materials
Locate the hazardous material storage area in the southeast corner of the staging area at least 150 feet from the stream. Fueling and other chemicals, including small fue cans, oil and hydraulic fluid containers and concrete chemicals, will be stored at least 150 feet from any stream channel, wetland or waterbody and must be fully contained.

2.3 Cleanup and Spill Containment
Spill containment kits, capable of containing the amount of hazardous products capable of being spilt, will be kept at the construction site and used in case of spills. Delete "the contaminated soil will be removed and disposed of in a manner predetermined by the USFS" and replace with "Reporting and Remediation guidelines as required by IDEQ, OSHA, and EPA will be followed."

Upon incorporation of these comments the Hazardous Substance Plan is considered approved.

Fishway and Fish Screen Monitoring Plan (Article # 407 – Construction pla ns Section D)

2.1 Fish Screen Monitoring
Change first sentence spelling of moralities to mortalities. In addition to recording species, number and length please add likely cause of death such as: angling, impingement, or avian. Predators in the area are likely to key into mortalities if they are occurring and will likely remove many dead fish before they can be enumerated. Observations should include looking for signs of predators (presence, tracks, sca , etc.) and recording these instances. To minimize possible loss to predators, screens need to cleaned and checked early in the morning and late in the afternoon.

Only occasional mortalities are expected. If high numbers of mortalities are observed these will be reported immediately. Reporting of mortality data is requested to be given in an electronic format using Microsoft Excel or in a format capable of being imported easily into Excel.

2.2 Fish Ladder Monitoring

Please add a sentence stating that the licensee shall be responsible for the term of the license to ensure proper function of the ladder. The ladder shall be considered properly functioning when it is working as designed with the orifices and auxiliary intake being free of debris with a uniform depth of water over each weir and the entrance submerged to the proper depth with sufficient flows to provide attraction to the entrance. Proper function of the ladder needs to be assured daily and documented on a weekly basis with frequency and type of problems reported.

The fish trap that is to be installed at the exit of the fish ladder needs to conform to the following:

- have a screen or vertical opening of no greater than 5/8"
- be 3-5 feet wide and at least 5 feet long to provide refuge from intake
- be secured to prevent tampering with access provided to IDFG, HFF, and USFS,
- designed to allow processing in the dry
- have a secured opening where fish can pass quickly through when not being captured
- be designed so as to prevent fall back into the fish ladder of trapped fish
- be designed to allow crowding of the fish to ensure efficient capture for processing
- be removable
- designed so flows to the ladder can be shut off for maintenance or inspection

Under licensee responsibilities, please add that modifications to flow patterns below the dam could include minor restructuring of the dam face or approach channel to assure efficient attraction and passage. If sealing of the dam is not successful and a majority of water continues to leak through the dam it may be necessary to alter portions of the channel below the dam to facilitate fish finding the ladder.

As mentioned in NPSI April 15, 2004 letter the ongoing cooperation with HFF concerning the video monitoring is expected to continue. In this same spirit of cooperation it is expected that if agencies or NGO's wish to further investigate questions concerning the effects of the Buffalo River Hydroelectric Project that the licensee would provide assistance through on-site personnel.

3.0 Agency Cooperation and Design Modifications

It is requested that NPSI's April 15, 2004 letter regarding monitoring be incorporated by reference into the monitoring plan.

Upon incorporation of these comments the Fishway and Fish Screen Effectiveness Monitoring, Evaluation, and Maintenance Plan is considered approved.

Condition No. 15 - Diversion Operation Plan (Article #410 – Construction Plans Section E)

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

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

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

Continued equipment access across the dam post construction has not been approved. It would be prudent during construction to incorporate other methods to pass large debris through the spillway such as a winching system.

Fine sediment is currently flushed during periods of high runoff. We agree sediment flushing is not an issue given past operation and stream type.

As part of the maintenance plan ensure that the spillway is kept free of debris that could hinder its effectiveness during high flow events. All debris needs to pass beyond the concrete sill and at an elevation below the concrete apron. The fish ladder is likely to provide a new cateh point for debris. This debris may need to be passed on to minimize erosion and conflicts with ladder operation.

Upon incorporation of these comments the Diversion Operation Plan is considered approved.

Condition No. 7 – Public Safety Plan (Construction Plans Section F)

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

The Licensee shall perform daily (or on a schedule otherwise agreed to by the Forest Service) inspections of Licensee's construction operations on National Forest System lands while construction is in progress. The Licensee shall document these inspections (informal writing sufficient) and shall deliver such documentation to the Forest Service on a schedule agreed to by the Forest Service. The inspections must include fire plan compliance, measures to provide for public safety, and environmental protection. The Licensee shall act immediately to correct any items found to need correction.

This plan is to identify potential hazardous situations, evaluate all project facilities for conformance with the International Building Code, and identify measures necessary to bring project facilities in conformance with the Code, and shall include a schedule for completion of any hazard abatement measures. The plan will also identify how the project complies with FERC's Guidelines for Public Safety at Hydropower Projects (March 1992). The Forest has no knowledge or evidence that this has been completed.

The Forest has the following additional comments:

- Reference within Safety Plan what standards are being followed for example OSHA, Manual of Uniform Traffic Control Devices (USDOT), or local ITD standards.
- Correct spelling in the plan from sight to site.
- It should be stated that the area will be signed and closed to public access during construction at an appropriate turnaround location such as the snowmobile parking area or intersection of road from the Box Canyon Campground. Area closure signing needs to be coordinated with issuance of a Forest Service Closure Order for the site.
- To facilitate public safety and awareness post weekly a construction schedule at the snowmobile parking area and provide a copy to the Island Park Forest Service Office.
- Local residents will need access to summer homes.
- Roads and highways should be signed as appropriate to comply with federal and state highway standards for construction and heavy truck traffic.
- As warranted signs should be posted upstream with appropriate warnings.
- Documentation of inspections and compliance shall be provided twice a week for the project inspector on Monday and Thursday.
- A sign stating there is "no designated take out ahead" needs to be placed near Highway 20 or canoe takeouts need to be allowed at the project site if it is safe to do so.

Until compliance with paragraph one of this condition has been satisfied and the additional comments included this plan is not approved.

Condition No. 10 - Recreation Plan (Construction Plans Section G)

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

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

In general, the Recreation Plan as stated in section G is an outline of objectives to be included in the site plan that is to be developed. In general we agree with these objectives with some exceptions. The Forests objectives for this site are as follows:

- Parking Lot - A gravel surface parking lot with six parking spaces. Located on the southwest side of existing loop on the end of the road. Parking lot will include rock parking barriers that are partially buried. (Precautions will need to be taken to preserve the island that exists in the loop drive on the end of the road prior to construction.)
- Trailhead Bulletin Board - A 4 by 6 foot wood bulletin board mounted on treated 4"x4" posts. This would be located next to the parking lot at the Box Canyon Trailhead.
- Interpretive Trail/Overlook and Signs - A gravel surface trail from the parking lot to the overlook where 2-3 interpretive signs would be placed that provide interpretation for the hydro project. This trail and overlook would be accessible with a gravel surface of 3/4" minus gravel. The location for this overlook and signing is tentatively identified as an area just below the dam on a naturally occurring shelf above the river.
- Trail to Dam - A trail from the parking lot to the dam that is constructed of treated timber steps (if needed) that are backfilled with 3/4" minus gravel. (It may be possible to just gravel the trail depending on the grade of the trail)

No formal consultation has occurred between the licensee and the Forest Service regarding the preparation of the recreation plans. And to our knowledge the site plan

requested in Condition No. 10 has not been prepared by the licensee or approved by the Forest Service.

Until such time that these requirements have been met through a reiterative planning process the Recreation Plan is not approved.

Condition No. 12 - Heritage Resource Protection (Construction Plans Section H)

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

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

Under procedure 2 add the additional contact:

Caribou-Targhee National Forest
Ali Abusaidi Forest Archaeologist
(208)-557-5777

Upon the addition of this contact information the Heritage Resource Protection Plan is considered approved.

Condition No. 13 - Scenery Management (Construction Plans Section I)

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

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

Mitigation measures shall include, but are not limited to:

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

In general this plan is vague and will need more detail before it can be approved. We need to know what is going to be removed or added and how those changes may affect the appearance of the site. It may work well to incorporate this plan with the site plan requested in the Recreation Plan to provide a visual sense of what will occur. The revegetation plan is also a critical component of mitigation that should be integrated.

3.1 Intake Structure and Fish Screens

The plan should indicate what the concrete structure will look like in terms of surface treatment and color. The Forest recommends that the concrete be cast to resemble adjacent rock surfaces (to match the fish ladder structure) in terms of pattern, texture and color. All exposed concrete needs concrete dye mixed throughout. Please provide additional information regarding the height of the proposed mechanical screen cleaner or on its visibility from the Henrys Fork.

3.2 Sealing the Dam Face

The steel sheet piles that are proposed need to be of a type of steel that will readily rust or darken to blend into the surroundings. Please provide details on how the top edge is to be finished.

3.3 Re-texturing the Powerhouse

It is our understanding that Kodiak Black is the color of the existing block powerhouse and that the exposed concrete will be stuccoed in a suitable color that blends the exposed concrete with the block and lava outcrops. In addition if practical, please add shrub, tree plantings or large rocks around the foundation to give a lower profile to the structure as well as hide some of the foundation.

3.4 Parking and Staging Area

A site plan needs to be prepared and approved.

3.4 Fish Ladder

Alternative 1 as depicted in the final fishway design submitted March 11th is the preferred design. We have the following additional comments:

1. Match the color of the exposed concrete structure to the natural color of the surrounding basalt rock using dyed concrete for all visible surfaces.
2. Provide *horizontal relief* and *texture (varied depth of the face of the wall on a large scale to make use of natural light and shadow)* along the exposed vertical concrete surfaces as exists in the natural faces occurring in the area. Drawing number 2 depicts a 3" depth to provide texture in the wall. Depth should be varied across the face of the wall from as little as 3" to as much as 6" to take the most advantage of natural light and shadow to blend into the natural surroundings. Alternative 1 indicates a rough textured surface that is not obvious from drawing 2. The surface should contain as much texture as depicted in alternative 1.
3. Please provide *random* blocking along the vertical concrete surfaces to closely match the natural faces occurring in the area. The natural landscape in the river corridor is a combination of angular, irregular sized rectangular blocks and angular, irregular shaped boulders in a columnar and boulder arrangement. The final exterior of the fishway wall should be a combination of all of these elements: angular, irregular sized rectangular blocks, angular, irregular shaped boulders, a columnar pattern and a boulder like pattern matching the natural pattern behind the ladder.
4. The alternative 1 artist's rendition random relief pattern appears closer together than the 6" to 12" indicated in drawing 2. The artist's rendition is preferable than what appears to be wider spacing in drawing 2.
5. Please provide *random* vertical or edge relief along the top of the horizontal surfaces of the concrete *to break up the visual line*, similar in relief to surrounding natural surfaces. The top of the wall will be 7 ½" wide according to drawing 2 and still allow for steel grating. This 7" portion of the wall must be randomly broken up horizontally to eliminate the unnaturally straight line. Straight lines and angles, along with random heights and lengths along the top of the wall would be sufficient. Too much symmetry should not be incorporated so it does not appear like the top of a castle wall.
6. The north elevation of the ladder in drawing 2 does not show any of the random relief patterns overlapping the top edge of the wall. Overlapping should occur randomly (so only a portion of the boulder/block is created) to help mimic the natural environment.
7. Native rock removed during construction should be backfilled along the base of the fishway in the river to hide the foundation.
8. The river channel west of the fishway and south of the dam should not appear to be dredged clean of native materials. Native rock and debris should be placed back in the river after construction on the dam is finished.
9. The east side of the ladder needs to "hug" the bank/rock wall as much as possible. Then rock can be placed behind and up to the top of the ladder wall. It will tie the ladder into the existing landscape and look much more natural from all viewing angles.
10. If feasible willow plantings and other shrubs could be planted in between the rocks next to the walls. This would help break up the long flat horizontal surface of the walls.

Condition No. 17 - Vegetation Management Plan (Construction Plans Section J)

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

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

The Vegetation Management Plan is considered approved upon incorporation of the recommendations.

Section J - 8, Table 3. The Forest suggests removing sheep fescue (Festuca ovina) and elk sedge (Carex geyerii) from the seeding mix. The available cultivars of sheep fescue are all non-native and elk sedge should come in on its own and would be extremely expensive to purchase as seed - if found available. Increase the percentage of slender wheatgrass to replace sheep fescue and elk sedge.

There should be a section or paragraph detailing the quality and point of origin of seed and seedlings used. All seed needs to be certified weed free.

The number of shrubs to be used seems very extensive for the level of disturbance. Instead we recommend that the site be prepared and seeded the first year and plant the shrubs the next year if needed as determined by monitoring, i.e. are there shrubs and trees resprouting and establishing on their own. To preserve local site adaptations it is recommended that local stock be used or transplanted from approved surrounding locations. Topsoil should only be removed and stockpiled if absolutely necessary for construction. For example revegetation would be more effective for the concrete truck

access for the fishway if topsoil could be left in place and then ripped post construction. This would preserve the native seed bank and allow resprouting of some shrubs.

The Revegetation Plan may need modification through the Scenery Management Plan as there may be areas where the concern is more over visuals than erosion. For example from a visual standpoint we may request fewer and larger shrubs strategically placed.

Ripping should be done to a depth of at least 12 inches or to the depth practical where bedrock occurs.

Condition No. 18 & 19 BE and BA for Threatened, Endangered, and Sensitive Species (Construction plans Section K)

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

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

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

Condition No. 19 -- Forest Service Sensitive Species Biological Evaluation

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

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

The US Fish and Wildlife Service have accepted the determinations for Threatened and Endangered species.

The BE for Forest Service sensitive species is lacking in some details, however, we do not disagree with the determination of effects and we will consider the plan approved upon incorporation of the following changes.

Yellowstone cutthroat is also a sensitive species that occurs within the Henrys Fork and needs to be addressed in the BE. A "May Impact" determination would be appropriate.

Incorporate a summary table that displays the determinations for all sensitive species such as the one below.

Species	No Impact	May Impact Individuals Or Habitat, But Will Not Likely Contribute To A Trend Towards Federal Listing Or Loss Of Viability To The Population Or Species	Will Impact Individuals Or Habitat With A Consequence That The Action May Contribute To A Trend Towards Federal Listing Or Cause A Loss of Viability To The Population Or Species	Beneficial Impact
Yellowstone Cutthroat		X		

Fishway Design Comments

Upon incorporation of the following comments the Forest Service considers the Fishway Design approved.

- The 4-6 inch rock to be placed within the ladder needs to specified as 4-6" rounded river cobble.
- Drawings need to show water intake detail. There is no indication of how flows into ladder will be controlled or shut off.
- A short Guide wall (5 feet) at the exit is needed to guide fish away from entrainment into spillway or auxiliary flows to eliminate fall back. The fish trap will provide this ability when it is installed but, if it is not to be left permanently a guide wall will need to be constructed.
- Profile two on sheet 10 of 12 appears to be in error as the streambed profile is above the top of the weir.
- There is a risk that the 45 degree angled wall upstream of the fishway entrance will create a back eddy at the entrance disorienting fish and impeding the ability of fish to detect the entrance to the fishway. It is suggested to shorten the length

of wall that extends out into the pool, turn the entrance downstream, or lessen the angle of the wall so it is more parallel with the flows.

- Auxiliary water entering the last (bottom) pool needs to have a diffuser installed so maximum velocities are 1 foot per second or less so fish are attracted to the weir and orifice not the auxiliary water inflow.

THE HENRY'S FORK FOUNDATION, INC.

Mailing Address
P.O. Box 550
Ashton, ID 83420

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Headquarters
606 Main Street
Ashton, ID 83420

Watershed Center
604 Main Street
Ashton, ID 83420

April 22, 2005

Brent Smith
Northwest Power Services
PO Box 535
Rigby, ID 83422

RE: Buffalo River Hydroelectric Project, FERC Project #1413 Articles 405, 406, and construction plans.

Dear Brent:

The Henry's Fork Foundation (HFF) has received your letters of March 11th, 16th, and 22nd of 2005, requesting comments on proposed work identified in the license for FERC Project #1413. These three letters concern: 1) article 405 (proposed fishway design), 2) construction plans, and 3) article 406/Condition No. 14 (proposed fish screen on the powerhouse intake). The HFF offers the following comments for each of these three letters:

1) Article 405, fishway design

In general, the design characteristics of the fish ladder, i.e., the length, gradient, and predicted water velocities within, are all very conducive to the objective to pass four inch rainbow trout, at a minimum.

Will the plate on the side spill need to be adjusted manually to regulate flow in the ladder and will the side spill be managed in conjunction with a headgate (no detail is given for the exit of the ladder)? Similarly, no design (i.e., a guidewall) is shown for a means of preventing fish that exit the ladder from falling back over the adjacent spillway. Furthermore, no design is presented for the fish trap to be constructed at the ladder exit. Please incorporate the designs of the above into your diagrams.

The 8" axillary water pipe that is situated along side the wall to the entrance of the fish ladder should likely be extended so that it is even with the end of the wall and the entrance. As currently designed, fish may be attracted to the axillary flow outlet and bypass the ladder entrance. Fish attraction to the axillary flow may be further lessened if a diffuser is installed on the outlet to the axillary flow.

The current sill, water flow, or both, that is downstream of the spillway should be modified so that fish are not attracted to or able to navigate upstream in this direction. Adult rainbow trout currently navigate in this direction to enter the orifice of the existing fishway. The proposed fish

ladder would have no means to pass fish around the dam if they migrate upstream past the proposed ladder entrance. If a blockage or impediments were placed downstream of the spillway then fish would then be more likely to enter the fish ladder rather than spending time and energy trying to navigate towards the spillway.

It is recommended that the notch on the top of the weirs and the orifices through the weirs be located on the same side of the pools within the fish ladder. This should provide for better orientation of the fish moving upstream in addition to providing resting areas on the opposite side of the pools.

It has come to my attention, by way of Lee Mabey's consultation with Brent Mefford (BOR Hydraulic Engineer), that the 45° angle of the ladder entrance may be problematic and that the angle should be lessened. Brent Mefford's suggestions of shortening the length of wall that extends into exit pool and turning the entrance downstream so that it is more parallel with the flow should be incorporated into the design.

2) Construction plans

Erosion Control Plan

3.2.3.2 Construction of the Fish Ladder:

Daily grab samples will be taken downstream of the fish ladder during construction. Where and when will the grab samples be taken?

4.2 Buffalo River Water Quality:

A compliance report of water quality monitoring will be furnished to the listed organizations three months after completion of the project. However, no mention is made of providing water quality information to the organizations during the construction phase. It is recommended that this information be made available to the organizations on a weekly basis during the construction.

Fishway and fish screen effectiveness monitoring, evaluation, and maintenance plan

2.1 Fish Screen Monitoring:

It is recommended that water velocity measurements be taken in front of the fish screen to evaluate if approach velocities meet the 0.8 feet per second for which the screen is designed.

2.2 Fish Ladder Monitoring:

No mention is made on the installation and maintenance of the video recording camera in the fish ladder. This camera (Henry's Fork Foundation equipment) had been used in the existing fish ladder to document upstream fish movement and was maintained (changing video tapes, etc) by the hydroelectric facility personnel. Furthermore, it is noted in Northwest Power Services letter of April 15, 2004 in appendix D-1 of this section of the plan that: " operating personnel....maintain recording equipment...for a period of three years..". Please include this language in the body of the construction plan document.

Data collected from the fish trapping at the ladder will be reviewed after one year. This review is proposed to help guide sampling when it is most efficient, i.e, data collection can be consolidated when the ladder is most used. In addition, it should also be included that data collection, i.e., frequency of trap checking, could potentially be expanded, when the fish ladder is most used.

It is also recommended that upon completion of the fish ladder that flow and velocity measurements are taken at several places within the ladder. This would allow an evaluation of the velocities predicted by the design criteria within holding pools and at orifices.

One of the primary objectives of facilitating better fish passage upstream of the Buffalo River hydroelectric project is to allow fish access to habitat in the Buffalo River, i.e., winter rearing habitat, which may be limiting in the Henry's Fork River. This access should facilitate increased recruitment of age 1-year old rainbow trout to the Henry's Fork River. As such, part of the objective of the dam modifications is to not only enhance upstream fish passage, but also to facilitate downstream passage. Therefore, some consideration should be given to an evaluation of the outmigration of juvenile trout at the Buffalo River hydroelectric facility. Previous attempts by the Henry's Fork Foundation to monitor juvenile outmigration were not very successful because of the difficulty of sampling in the Buffalo River upstream of the hydroelectric facility. In addition, sampling at the dam was inefficient because of the movement of fish into the turbine intake or under the dam. The proposed work on the facility such as: installing a smaller screen on the turbine intake and sealing the face of the dam should provide an enhanced opportunity to determine the outmigration of fish at the dam. This is especially important given that upstream passage should be greatly enhanced with the proposed fish ladder. Given the above, it is recommended that the operating personnel be made available to check an outmigrant trap if this type of sampling is deemed valuable by the reviewing organizations at a later date.

Recreation Plan

Will the Box Canyon trailhead at the parking area be accessible for hikers during the construction? If so, will a parking area be designated for these users during construction?

3) Article 406/Condition No. 14, proposed fish screen

The design of the proposed fish screen (1/4 inch mesh size with a large overall surface area of the screen) appears to address the desire to keep approach velocities around 0.8 feet per second. As noted above, upon completion of the intake structure then velocity measurements should be taken to verify that these screen criteria do result in the desired approach velocities. In addition, detailed records should be kept of any fish mortalities or impingments on the screen.

Thank you for informing the HFF about these license requirements and considering our comments.

Sincerely,

Jim De Rito
Conservation Director
Henry's Fork Foundation

cc: Lee Mabey, USFS
Gary Vecellio, IDFG
Scott Christensen, GYC

United States Department of the Interior
FISH AND WILDLIFE SERVICE
Snake River Fish and Wildlife Office
1387 S Vinnell Way, Suite 368
Boise, Idaho 83709

TAKE PRIDE IN AMERICA

MAY 05 2005

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

Subject: Buffalo River Hydroelectric Project, Fremont County, Idaho
-- Comments on Final Fishway Design
FERC #1413-032 OALS #05-0525

Dear Mr. Smith:

The Fish and Wildlife Service (Service) is writing to provide comments on the final design for the Buffalo River fishway (fishway). We received the final design and request for comments on March 14, 2005. We recognize that these comments will be received after the 30 day comment period you requested in your letter, and we request that they be considered to the extent possible. The Service is providing comments pursuant to our authorities under the Federal Power Act, as amended (16 U.S.C. 791 et seq.) and the Fish and Wildlife Coordination Act (16 U.S.C. 661 et seq.).

The final fishway design proposed by Northwest Power Services, Inc., is intended to meet the requirements of Article 405 of the Subsequent License for the Buffalo River project issued by the Federal Energy Regulatory Commission on November 5, 2004. Based on our review, the final design meets the fish passage criteria previously recommended by the Service, USDA Forest Service, and Idaho Department of Fish and Game. The Service has the following two comments on the final design.

1. A short guide wall (e.g., 5 feet) located at the fishway exit is necessary to guide fish away from the spillway and auxiliary flows to prevent fall back and increase passage effectiveness. If the fish trap used for monitoring is left in place permanently a guide wall would not be necessary.

2. It is possible that the 45-degree angled wall at the entrance to the fishway may create a back eddy when higher flows occur, which could make it difficult for fish to detect the entrance of the fishway. This could be remedied by shortening the length of the wall, or by turning the entrance downstream, thereby lessening the angle and orienting the wall more parallel with the river flow.

The Service appreciates the Applicant's cooperative approach, and looks forward to continued discussions regarding this project. If you have any questions regarding our comments, please contact Kendra Womack at (208) 685-6955.

Sincerely,

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

cc: FWS, Chubbuck (Deb Mignogno)
CTNF, Idaho Falls (Lee Mabey)
IDFG, HQ-Boise (Scott Grunder)
IDFG, Idaho Falls (Gary Vecellio)
FERC, Washington DC

United States Department of Agriculture | Forest Service | Caribou-Targhee National Forest | 1405 Hollipark Drive Idaho Falls, ID 83401 208-524-7500

File Code: 2770
Date: July 11, 2005

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

Re: Buffalo River Hydropower Project, FERC Project # 1413

Dear Brent:

The USDA Forest Service has received for review and comment the updated Recreation and Scenery Management Plans in your letter dated May 16, 2005. The Forest Service approves the Recreation and Scenery Management Plans as sufficient to meet Conditions No. 10, and 13(Article 401) of the license. This approval is based upon the Licensee's agreement with our previous comments and there incorporation into the plans.

Condition 11, Interpretive Display Plan, has been incorporated into the Recreation Management Plan. That plan relative to placement of the sign is approved. As agreed to at our May 27, 2005 meeting, the exact wording of the interpretive sign will be submitted to the Forest Service for approval.

We appreciate the opportunity to review these plans.

If you have any questions or need additional information, please contact Lee Mabey, Team Leader at (208) 557-5784.

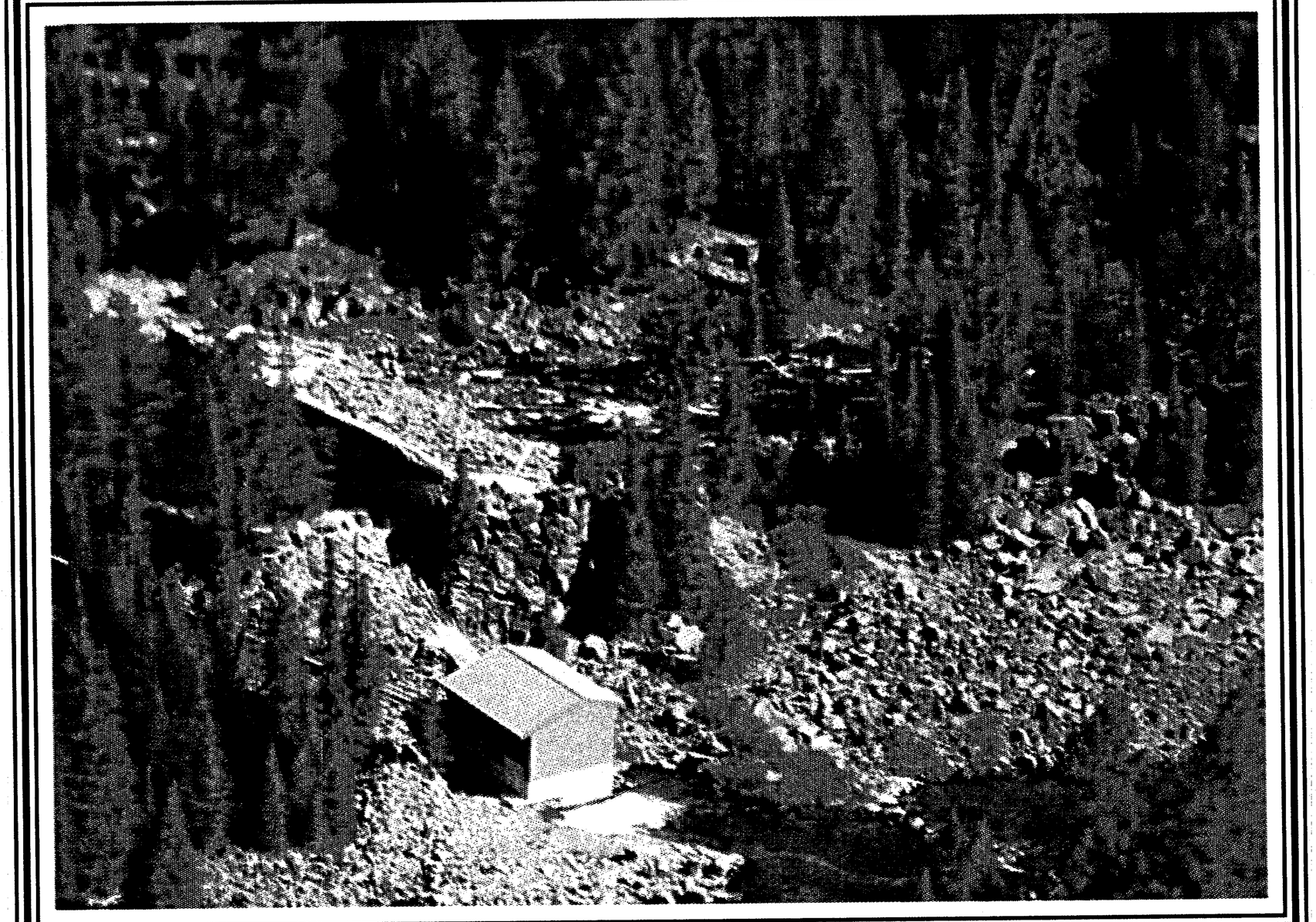
Sincerely,

WES STUMBO
Acting Forest Supervisor

Buffalo River Hydroelectric Project

FERC Project #1413

Recreation Management Plan



Prepared for:

Fall River Rural Electric Cooperative, Inc.
Ashton, Idaho

Prepared by:

Northwest Power Services, Inc.
Rigby, Idaho

Ecosystems Research Institute, Inc.
Logan, Utah

July 2005

Buffalo River Hydroelectric Project

FERC Project No. 1413

Recreation Management Plan

Prepared for:

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

Prepared by:

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

Ecosystems Research Institute
975 South State Highway
Logan, Utah 84321

Recreation Management Plan

1.0 Introduction

A license was issued to Fall River Rural Electric Cooperative, Inc. (Fall River) in November of 2004 by the Federal Energy Regulatory Commission (Commission) for the alteration and continued operation of the Buffalo River Hydroelectric Project. The 250-kilowatt (kW) run-of-river project is located on the Buffalo River near its confluence with the Henry's Fork of the Snake River, north of Ashton, in Fremont County, Idaho. The license stipulates several terms and conditions which must be met with approval from various resource agencies. The purpose of this document is to describe the site specific effects the construction and operation of this project will have on the area's recreational resources. It has been developed in response to Article #401 4(e) 10 and US Forest Service (USFS) Condition #10 of the license which states:

> ***Within one year of license issuance the licensee shall file with the Commission a Recreation Management Plan that is approved by the Forest Service. The plan shall include:***
>
> > ***-Licensee responsibility for construction, operation, and maintenance of recreation facilities and sites on National Forest System lands,***
> >
> > ***-Specific mitigation measures for existing recreation facilities and sites, including compliance with the Americans with Disabilities Act. The plan should include accommodations for the existing parking area and turn-around at the end of Forest Road #80136, Riverside Drive.***
> >
> > ***-Planning for future development or rehabilitation of recreation facilities or sites. Future development or rehabilitation of recreation sites shall include the parking area, the short trail connecting parking area to Box Canyon Trailhead and turn around on the south side of the Buffalo River, access via Forest Road 80136, Riverside Drive. Other future recreation developments should include interpretive signing for hydropower facilities and the Box Canyon trail along the Henrys Fork River. A site plan should be provided at scale of one inch equals 30, 40, 50 feet and approved by the Forest Service prior to construction activities.***
>
> ***In addition to consultation with the Forest Service, the licensee shall prepare the above plans after consultation with IDFG, FWS, IDEQ, and IDPR. The licensee shall include with the plans documentation***

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

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

2.0 Existing Recreation

Recreational use is considered an essential element to the Buffalo River Hydroelectric Project by the Forest Service. The project area supports numerous activities including fishing, swimming, non-motorized boating, bird watching, hiking, cross-country skiing, and snowmobiling. Streambank enterprises upstream of the project along the Buffalo River include a large developed campground site with 122 individual camping areas, sewer system, electrical hook-ups, a universally accessible fishing dock, two cross-country ski trails, the Buffalo Summer Home Area, a railroad right-of-way trail crossing the Buffalo River; Ponds Lodge (a year-round resort), and numerous private homes bordering the river. The project area is accessible from Highway 20 to the east on both the south and north side of the river. The southern access road, referred to as Riverside Drive or Road 80136 by the Forest Service, provides an undeveloped parking area and turnaround resulting from increased recreation activity (USFS 2002).

3.0 Recreational Development

The licensee will provide the following recreational improvements:

-Upgrades to the parking area associated with public access to the dam and the project's staging area. Including the short trail connecting the parking area to Box Canyon Trailhead and turn around on the south side of the Buffalo River, access via Forest Road 80136, Riverside Drive.

-Installation of a sign describing the project to visitors at the site, and a trail to the sign location.

- A 4 foot by 6 foot sign board will be installed at the parking area for the Box Canyon Trailhead and USFS use.

The following sections will address each of the recreational improvements the licensee is proposing in the project vicinity.

3.1 Parking Area and Turn Around

The current parking area and turn around is an ungraded pull off area lacking well defined boundaries. Once improved, the area will be well defined and will include one handicapped parking area. Improvements will include (see Site Plan):

-Defining the parking area boundaries by placing large rock either obtained during project excavation or from an outside source around the perimeter of the parking area.

-Designating a handicapped parking spot which will be 16 feet by 20 feet, clearly defined, and marked with the appropriate sign.

-leveling and grading (if necessary) the parking area and turn around.

3.2 Interpretive Sign

An interpretative sign will be located at the end of the proposed trail, within view of the dam and forebay. The sign will provide a history of the hydropower facility, describe its operations, benefits, and measures taken to mitigate environmental effects. The exact verbiage of the sign will be determined at a later date and will be approved by the USFS. See the Site Plan for location.

3.3 Trail to the Interpretive Sign

The interpretive sign will be located at the end of the proposed trail. The trail will be limited to a maximum of 5% slope. The interpretive sign will overlook the forebay and dam, also the interpretive sign location will have a 60 inch by 60 inch area that will have 6 inch barriers on three sides of the area and if needed handrails. See the Site Plan for location.

3.4 Box Canyon Trailhead Sign

A 4 foot by 6 foot sign board will be installed at the parking area for the Box Canyon Trailhead. In addition, it will allow an area for the Forest Service to post information about current recreational opportunities or other information of possible interest to the public. See the Site Plan for location.

4.0 Maintenance

The licensee will be responsible to build the recreational developments describe in these plan. After the completion of the construction actives the licensee will remain responsible for the Interpretive Sign, all other recreational developments will be turned over to the USFS.

5.0 Comments and Responses

IDFG April 13, 2005

IDFG Comments 1

This section addresses, in part, "future development or rehabilitation of recreation facilities or sites". We request that the facility owners/operators cooperate with IDFG, Idaho Department of Parks and Recreation, and the USFS and consider building a non-motorized boating access in the backwaters of the facility. This river corridor is, in our opinion, not appropriate for motorized boating. However, it is designated by the USFS as "Eligible Recreational River" from the confluence of Elk Creek to the forebay of the hydropower project.

Response: The licensee will work in cooperation with IDFG and the USFS in outlining future recreational developments associated with the project area. The addition of boat ramp as a project feature has little potential to conflict with the hydroelectric project's features. However, it is not the licensee's intent to include this addition as one of "their" development features.

IDFG Comment 2

IDFG believes that quality recreational fishing and wildlife watching opportunities would perhaps be opened by allowing people to take out canoes or personal non-motorized watercraft such as pontoon boats near where the "Danger-No-Boating" signs now are. Canoes and personal non-motorized watercraft would be able to enter the river either at the USFS fishing peir, USFS campground, or Highway 20 bridge for a leisurely and youth-friendly fishing and floating experience. This would necessitate a landing and path to take their boat out near the parking area at the end of Riverside Drive. We believe that the groups should cooperate and explore this possibility as part of your recreational plan.

Response: The licensee will work in cooperation with IDFG and the USFS in outlining future recreational developments associated with the project area. The addition of a landing/boat ramp as a project feature has little potential to conflict with the hydroelectric project's features. However, it is not the licensee's intent to include this addition as one of "their" development features.

1DFG Comment 3

We understand that operators of the hydropower facility are perhaps the primary user of the USFS road on the northern shore of the Buffalo River Below the Highway 20 bridge. Please disclose any plans you have to gravel, grade, harden or upgrade this road for access to your facility which may be used by the public.

Response: As was previously discussed with the USFS, the Licensee will continue to put

pit-run in the low areas of the road. The Licensee responsibilities will be outlined in the USFS Special Use Permit.

USFS April 21, 2005

USFS Comment 1
In general, the Recreation Plan as stated in section G is an outline of objectives to be included in the site plan that is to be developed. In general we agree with these objectives with some exceptions. The Forests objectives for this site are as follows:

- Parking Lot - A gravel surface parking lot with six parking spaces. Located on the southwest side of existing loop on the end of the road. Parking lot will include rock parking barriers that are partially buried. (Precautions will need to be taken to preserve the island that exists in the loop drive on the end of the road prior to construction.)

- Trailhead Bulletin Board - A 4 by 6 foot wood bulletin board mounted on treated 4"x4" posts. This would be located next to the parking lot at the Box Canyon Trailhead.

- Interpretive Trail Overlook and Signs - A gravel surface trail from the parking lot to the overlook where 2-3 interpretive signs would be placed that provide interpretation for the hydro project. This trail and overlook would be accessible with a gravel surface of 3/4" minus gravel. The location for this overlook and signing is tentatively identified as an area just below the dam on a naturally occurring shelf above the river.

- Trail to Dam - A trail from the parking lot to the dam that is constructed of treated timber steps (if needed) that are backfilled with 3/4" minus gravel. (It may be possible to dust gravel the trail depending on the grade of the trail)

No formal consultation has occurred between the licensee and the Forest Service regarding the preparation of the recreation plans. And to our knowledge the site plan requested in Condition No. 10 has not been prepared by the licensee or approved by the Forest Service.

Response: It is the licensee's intent to construct and install one sign, as is required under Condition #11 of the license. The remainder of proposed recreational improvements can be found in the Recreational Management Plan (Pages 2-4) which includes another sign for the Box Canyon Trial. The following page contain the site plans has been added to this plan.

HFF April 22, 2005

HFF Comment 1
Will the Box Canyon trailhead at the parking area be accessible for hikers during the construction? If so, will a parking area be designated for these users during construction?

Response: No, after consultation with the USFS, the Licensee will close the trailhead.

LARGE-FORMAT IMAGES

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

For Large-Format(s):
Accession No.: 20050727-0187

Security/Availability:

- [X] PUBLIC
- [ ] NIP
- [ ] CEII
- [ ] NON-PUBLIC/PRIVILEGED

File Date: 7/26/05 Docket No.: P-14 3

Parent Accession No.: 20050727-0185

Set No.: 1 of 1

Number of page(s) in set: 3

Correspondence on Plan

United States Department of Agriculture
Forest Service
Caribou-Targhee National Forest
1405 Hollipark Drive
Idaho Falls, ID 83401
208-524-7500

File Code: 2770
Date: April 7, 2005

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

Re: Buffalo River Hydroelectric Project, FERC Project #1413

Dear Brent:

The USDA Forest Service has received for review and comment several plans submitted by Northwest Power Services, Inc. These plans are required by the Buffalo River Hydroelectric Project, Federal Energy Regulatory Commission (FERC) Project # 1413 License issued November 5, 2004. These plans are dated March 11-23, 2005 and request comments within 30 days. As identified and agreed upon in your telephone conversation with Lee Mabey on March 30, 2005, the USDA Forest Service will review all of these plans and provide one response to Northwest Power Services, Inc. by April 23, 2005, which is 30 days from the date the last plan was submitted.

If you have any questions or need additional information, please contact Lee Mabey, Team Leader at (208) 557-5784.

Sincerely,

JERRY B. REESE
Forest Supervisor

cc: Ms. Magalie R. Salas, Secretary, Federal Energy Regulatory Commission, 888 First Street N.E., Washington, DC 20426

IDAHO FISH & GAME
Upper Snake Region
4279 Commerce Circle
Idaho Falls, Idaho 83401

Dirk Kempthorne / Governor
Steven Huffaker / Director

11 April 2005

Brent Smith
President, Northwest Power Services Inc.
PO Box 535
Rigby ID 83442

RE Buffalo River Hydroelectric FERC #1413 Article 406 Condition 14 Fish Screen, and Article 405 Fishway Design:

Dear Brent:

Idaho Department of Fish and Game (IDFG) has reviewed the above referenced letters and accompanying diagrams. IDFG has been involved in FERC #1413 re-licensing and associated articles of the license since the process' inception. We are in receipt of letters and engineering drawings for (1) the proposed fish screen mechanism as required in article 406, letter dated March 22, 2005 and (2) the proposed fishway design as required by article 405, letter dated March 11, 2005.

Fish Screen Mechanism, Article 406:
We support the intake and fish screen as proposed in the drawings. We believe that the intake section of the screen, and the ¼ inch design openings, will serve to protect all but the very smallest of fish from passing into the turbines. Other documents relate to the estimated 0.8 feet per second approach velocity of the water going through the intake screen. This velocity should serve to protect all but the smallest of fish from becoming impinged upon the intake screen. The dimensions and estimated water velocities approaching the screen are acceptable to us.

We understand that the re-licensing process necessitates monitoring of this intake screen. We are unsure at this point, how the screen will be cleaned and are accepting that it will somehow occur manually. That is, no additional hardware, or grates will be attached to the screen mechanism. We would like to see the proposed method of cleaning the intake screen, the schedule it might occur, and any conceptual plan you might have for monitoring fish impingement.

Fishway Design, Article 405:
IDFG staff has worked in conjunction with your staff and consultants, and with those from the U.S. Forest Service, and the Henry's Fork Foundation to develop the best design possible given the conditions under which this fishway must be built and function. We believe that together, we have provided recommendations resulting in a design with an excellent likelihood of functioning successfully. We are satisfied that you have provided ample opportunity for IDFG to review and consult in the design phase, and you have recommended a final design acceptable to us.

It will be critical to monitor construction of the fishway to assure that slopes, pool sizes, pool width/length ratios, and all other design features are constructed appropriately. To this end, we anticipate having our Environmental Staff Biologist Gary Vecellio observe construction as the pla n becomes a reality. We also hope you will invite others who helped in this design, and hope you have retained the services of the engineering firm (Sunrise Engineering Inc.) responsible for the drawings to monitor fishway construction.

We are concerned that several very specific design recommendations actually appear in the fina l product. Critical design features include:

- Pool width/depth ratios of 1:1 or larger. Each pool must be as long, or longer than it is wide to reduce the likelihood of patterns of turbulence within and among pools.
- Wing walls where the water inside the fishway turns 180 degrees must be angled at 45 degrees as shown in sheet number 4.
- Piping for the auxiliary water flow is critical to fishway efficiency. The additional flow provided at the valve box near the downriver end of the fishway must be angled parall el to the outflow of the fishway,
- It is critical that the entrance pool (large drawing, sheet 10) of the fishway (for fish mo ving upstream) be located in the existing natural pool of the Buffalo River. The pool length s and fishway total length is designed to utilize this natural resting pool for fish to begin swimming into the fishway.
- Rock to be used to line the floor of the fishway must be rounded river rock, not angul ar broken basalt. These should average 4" to 6" mean diameter (sheet 4).
- Baffle boards installed between pool sections are to be designed specifically as sho wn in Drawing C, Sheet 5. To achieve both streaming and plunging flows within the fishw ay, we anticipate needing this specific design. The orifice within the baffle board sections s hould initially be placed opposite (not below) the notch in the top baffle board (drawing C, Sheet 5).
- It is critical that the design is able to be modified post-construction. By this we mea n that the baffles will be able to be removed, replaced, and changed in design and orifice location. This will necessitate that slots are used to place these baffle boards (dra wings C & E, sheet 5).

We are concerned that you may need to engineer and construct some form of cage, or cag e-holding mechanism at the upstream end of the fishway for use in your monitoring program This is not shown in your drawings. Also, is additional engineering necessary to de-water the fish way for moving or replacing baffles. Should drawings of the mechanisms needed to dewater the f shway accompany this package?

IDFG supports your plans and engineering for the fish screen and fishway. We believe th at the designs and engineering approaches taken will be likely to allow upstream and downstre am passage of salmonids down to 100mm in length. We appreciate being an integral part of the design process for these components. We believe you have entirely complied with FER C requirements within Articles 405 and 406 to provide consultation to IDFG in these phase s.

If you have any questions, please contact our Environmental Staff Biologist Gary Vecellio at 525-7290.

Sincerely,

R.J. Saban

Robert J. Saban
Regional Supervisor

RJS:gmv

Cc: Natural Resource Policy Bureau, IDFG
Phil Jeppson, IDFG Engineering
Fisheries Bureau, IDFG
Jim Fredericks, IDFG
Lee Mabey, USFS
Jim DeRito, HFF
Scott Christensen, GYC

IDAHO FISH & GAME

Upper Snake Region
4279 Commerce Circle
Id Idaho Falls, Idaho 83401

Dirk Kempthor ıe / Governor
Steven Huffake · / Director

13 April 2005

Brent Smith
President, Northwest Power Services Inc.
PO Box 535
Rigby ID 83442

RE Buffalo River Hydroelectric Project, FERC 1413, Construction Plans:

Dear Mr. Smith :

Idaho Department of Fish and Game (IDFG) has reviewed the above referenced report a nd plans, consulted with the U.S. Forest Service (USFS) and several non-governmental entities, a ıd we submit the following comments for your consideration. IDFG has been involved in FERC #1413 re-licensing and associated articles of the license since the beginning. The construction pl ans cover 11 sections pertaining to FERC #1413, including Fishway and Fish screen monitoring pla n (Article 407), Public Safety Plan (Article 410, and USFS Condition #15), and Recreation Plan (U SFS Condition #10).

Fishway & Fish Screen Monitoring Plan (Article 407), Section D:
As noted in our letter dated 11 April 2005, we support the intake and fish screen as prop ısed in the drawings. We also support the fishway diagrams with consideration to our comments of 11 April 2005.

Section 2.1 Fish Screen Monitoring states that the approach velocity of water toward the fish screen will be 0.8 feet per second. We request that basic measurements be made to est ablish this approach velocity upon plant operation. Further, we request that you attempt to docume nt a zero 'sweeping' velocity along the fish screen.

Section 2.2 Fish Ladder Monitoring- Please provide a diagram or engineering drawings o f the fish trap to be used in monitoring upstream fish use of the fishway. We recognize that the dr awing may be conceptual at this point. We request that the monitoring project be designed to verify that downstream fish passage through the fishway occurs as well as upstream fish passage. We recognize that the majority of flow, and presumably fish, will wash downstream via the ov erflow.

Please state that you will allow access to IDFG, and the U.S. Forest Service (USFS) to a l fishway facilities and screens in order to monitor conditions. We intend to take flow measuremen ts within the fishway at varying water levels in hopes of achieving the best fish passage condition s possible by altering baffle shapes and orifice positions if necessary.

Diversion Operation Plan, Article 410, Section E:
Please comment on your need to remove sediment from the forebay of the project in the past. Your statement that it will not be necessary may be correct. But, if sediment removal is necessary due to an upstream event, we would like your plans on how it will occur.

Under Procedures for flood conditions, you state that you intend to "pull the stop logs increasing flow through the dam spillway" if this becomes necessary. IDFG requests that, should this occur, you closely monitor for changes in the streambed at the downstream entrance to the fishway and below. The fishway is designed to begin at a critical pool along the upstream migration path. If pulling stop logs to increase flow through this section occurs, we need to ensure that the stream channel is monitored for alteration. If the fiswhay entrance pool is changed or destroyed, or the fishway entrance conditions altered, IDFG needs assurance that it will be reconstructed. Your procedures for flood conditions must incorporate monitoring of the channel from the fishway entrance downstream at least 50 meters.

Public Safety Plan, USFS Condition #7, Section F:
You claim that the river corridor between the highway 20 bridge and the hydropower backwaters is "a very low use recreational area". We do not agree, but suggest that fishing is an important recreational use in this area. Other uses such as skiing and waterfowl watching are also popular. We suggest that the primary factor keeping fishing use lower than what might be expected is a lack of access along this section of river. The Buffalo Summer Home area on the south river shore detracts from the public accessing the river corridor along the most frequently traveled shore (Forest Road 136). We suggest that the hydropower facility owners consider cooperative efforts to increase recreational access to this river from the southern shore (see next section).

Exhibit B shows approximate locations of "Danger-No Boating or Swimming Beyond this Point" signs. We would like to know the rationale for the location of these signs. Are there conditions in your FERC license stating that these signs are placed a specific distance from the dam? Are these recommendations or regulations given to you in your Special Use Permit by the USFS? We would like you to consider and report what is necessary (by law or permit condition) in terms of this signage. If this signage is entirely voluntary, then we would like to cooperatively re-consider what boating usage may be reasonable and safe in the forebay above the dam.

Recreation Plan, USFS Condition #10, Section G:
This section addresses, in part, "future development or rehabilitation of recreation facilities or sites". We request that the facility owners/operators cooperate with IDFG, Idaho Department of Parks and Recreation, and the USFS and consider building a non-motorized boating access in the backwaters of the facility. This river corridor is, in our opinion, not appropriate for motorized boating. However, it is designated by the USFS as "Eligible Recreational River" from the confluence of Elk Creek to the forebay of the hydropower project.

IDFG believes that quality recreational fishing and wildlife watching opportunities would perhaps be opened by allowing people to take out canoes or personal non-motorized watercraft such as pontoon boats near where the "Danger-No Boating" signs now are. Canoes and personal non-motorized watercraft would be able to enter the river either at the USFS fishing peir, USFS

campground, or Highway 20 bridge for a leisurely and youth-friendly fishing and floating experience. This would necessitate a landing and path to take their boat out near the parking area at the end of Riverside Drive. We believe that the groups should cooperate and explore this possibility as part of your recreational plan.

We understand that operators of the hydropower facility are perhaps the primary users of the USFS road on the northern shore of the Buffalo River below the Highway 20 bridge. Please disclose any plans you have to gravel, grade, harden or upgrade this road for access to your facility which may be used by the public.

Thank you for the opportunity to comment on this document. If you have any questions, please contact our Environmental Staff Biologist Gary Vecellio at 525-7290.

Sincerely,

R. J. Saban
Regional Supervisor

RJS:gmv

Cc: Natural Resource Policy Bureau, IDFG
Adrienne Keller, USFS
Lee Mabey, USFS
Jim DeRito, HFF
Scott Christensen, GYC
Mary Lucachick, IDPR

STATE OF IDAHO
DEPARTMENT OF
ENVIRONMENTAL QUALITY

900 North Skyline Dr., Suite B • Idaho Falls, Idaho 83402-1718 • (208) 528-2650

D rk Kempthorne, Governor
Toni Hardesty, Director

April 20, 2005

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

RE: BUFFALO RIVER HYDROELECTRIC PROJECT (FERC # 1413) CONSTRUCTION PLANS

Dear Mr. Smith:

The Idaho Department of Environmental Quality (IDEQ) has reviewed your constructic n plans, dated March 16, 2005. We would offer the following comments and suggestions:

General Comments
All in-stream excavation should be conducted in a manner which minimizes se liment transport and turbidity. This can be accomplished through effective use of best management practices (BMPs), timing, and precise excavation.

Specific Comments
Section 3.1.1. The temporary storage area should be separated from the river with silt fence or suitable erosion control best management practice.
Section 3.2.1. The turbidity of the river below the location of the coffer dam and removed water shall not exceed state water quality standards (see IDAPA 58.0 .02 for details). Real time monitoring should be reviewed during the activity so that construction or pumping activities can be curtailed if necessary.

In addition, IDEQ will not be issuing any addition water quality certifications for the construction outlined in the plan. The November 28, 2003 water quality certification issued by this office covers the construction activities detailed in your construction plans.

If IDEQ can clarify any of our comments or can be of addition assistance, please do no hesitate to contact me at 208.528.2650 or tsaffle@deq.idaho.gov.

Sincerely,

Troy Saffle
Regional Water Quality Manager
Idaho Falls Regional Office

c: James Johnston, Regional Administrator
Gary Vecellio, IDFG
Lee Mabey, USFS

IFRO

30061

United States Department of Agriculture | Forest Service | Caribou-Targhee National Forest | 1405 Hollipark Drive Idaho Falls, ID 83401 208-524-7500

File Code: 2770
Date: April 21, 2005

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

Re: Buffalo River Hydroelectric Project, FERC Project #1413

Dear Brent:

The USDA Forest Service has received for review and comment several plans submitted by Northwest Power Services, Inc. These plans are required by the Buffalo River Hydroelectric Project, Federal Energy Regulatory Commission Project No. 1413 License issued November 5, 2004. These plans are dated March 11 to 23, 2005 and request comments within 30 days. As identified and agreed upon in your telephone conversation with Lee Mabey on March 30, 2005 and documented in my letter to you dated April 7, 2005, the USDA Forest Service has reviewed all of these plans and is providing one response to Northwest Power Services, Inc. by April 23, 2005, which is 30 days from the date the last plan was submitted.

Detailed Forest Service comments on the attached plans are included within Enclosure 1. A total of twelve plans were submitted and the Forest Service is approving eight of the twelve plans with some edits (see Enclosure 1). The plans which are not approved include the Construction, Recreation, Safety and Scenery Plans. It is anticipated that Forest Service comments will be addressed in all the plans and additional details (as requested in Enclosure 1) will be provided to the Construction, Recreation, and Scenery Plans prior to them being resubmitted for approval.

We appreciate the opportunity to review and comment on these plans and look forward to working with you on the approval of the Construction, Recreation, and Scenery Plans.

If you have any questions or need additional information, please contact Lee Mabey, Team Leader at (208) 557-5784.

Sincerely,

JERRY B. REESE
Forest Supervisor

Enclosure

cc: Ms. Magalie R. Salas, Secretary, Federal Energy Regulatory Commission, 888 First Street N.E., Washington, DC 20426

Enclosure 1
Comments on Buffalo River Hydroelectric Project (P-1413) Plans

Condition No. 1 - Approval of Final Design (Article #401)

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

The Forest has received for approval stamped engineering plans for the intake structure and screen, fish ladder, and sheet piling. The fish ladder will be commented on under Article 405 Upstream Fishway Design Drawings and under Condition No. 13 Scenery Management Plan.

We offer the following comments on the Final Design Plans and Specifications:

- The sheet piles placed around the dam structure are supposed to be grouted in place using a tremie. It is important that the tremie be positioned as close to the point of placement as possible to avoid segregation of the grout as it passes through the water. A note in the specs or plans would be appropriate.

- The Erosion Control Plan Section 3.2 indicates that continuous turbidity monitoring will take place during construction of the intake, grouting sheet piles, construction of fish ladder, and removal of coffer dam. There does not appear to be any mention of turbidity monitoring in the plans or specs. There should be a spec indicating the required type of sampling device, max turbidity, and action to take if levels are exceeded. Monitoring of pH levels is recommended during the grouting process (see Erosion Control Plan comments).

- The Erosion Control Plan Sections 3.2.7 and 3.2.8 indicates the use of erosion control devices such as silt fence and straw bales to limit the intrusion of sediment into the river. There is no mention of erosion control in the plans or specs, therefore, it is recommended that the required erosion control devices and placement be included in the plans and specs.

- There is a lack of detail in the construction plans which do not allow a full determination of how changes due to project construction may impact or change

recreational access or affect scenic values. For example the rocky cliff area between the intake and the powerhouse is likely to be modified to provide a safer access to the screen, dam and fish ladder facilities, however, there is no acknowledgement or description of these changes identified. Previously here was mention of a self cleaning mechanism for cleaning the intake screen yet no detail has been given. In addition the construction of the access across the dam is not described. In earlier conversations we discussed the need that rock used to create a flat driveable surface across the top of the dam needed to be similar in color to the existing rock. We also provided information regarding a possible pit source on the Forest where arrangements could be made to secure the needed rock.

- Plans need to show full detail of fish ladder exit or water entrance.

At this time without full detail it is not possible for the Forest to approve these plans or predict the full impacts of this project on other items of concern to the Forest.

Condition No. 16 - Erosion Control Measures Plan (Article # 302 - Section A of Construction Plans)

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

We have the following comments regarding Section A of the Construction Plans:

General Erosion Control Measures

3.1 – 1 The Forest requests that the staging area be moved to an approved location southwest of the proposed staging site. The staging area needs specific locations to be identified for spoil storage, a hazardous materials storage area and a concrete cleaning area to avoid unnecessary site impacts. The plan needs to state specifically that the area outside of the staging area will not be used. The edge of the spoil piles needs to be at least 50 feet away from the slope break near the edge of the trees not 50 feet from the river. The hazardous materials need to be located at least 150 feet from the river. A suggestion would be to place it in the southeast corner of the staging area. The staging area needs to have a silt fence or equivalent between it and the river. Restoration of the staging area needs detailing in the Revegetation Plan.

3.1 - 2 It is stated that disturbances beyond permanent roads and parking areas will be revegetated. Treatment of access roads, project roads and parking areas need to be defined and approved in the recreation site plan, Road Use Permit and Special Use Permit. A recreation site plan has not yet been prepared (see comments under Recreation Plan). The Erosion Control Plan should state the specific page and section in the Vegetation Management Plan that addresses how areas will be revegetated.

3.1 – 4 Practices to confine, remove and dispose of excess concrete, cement, and other mortars or bonding agents, including measures for washout facilities needs to be incorporated. A silt fence or equivalent needs to surround the cleaning area. Any waste materials deposited during the cleaning process are to be removed and disposed of properly. Runoff into the river is not permitted. Equipment cleaning needs to be done at least 50 feet away from the slope break near the edge of the trees.

3.1 -5 The Forest requests that decomposable fiber mats are replaced by hydro mulch as hydro mulch is less susceptible to impacts by animals that sometimes get entangled in fiber mats. If straw or straw bales are used they shall be certified weed free. Figure A-3 shows an access road in red to the dam with no explanation of surfacing or how it will be made passable nor does the Vegetation Management Plan provide details concerning its restoration. No detail is given on the concrete truck access, the more native soil that can be left in place the easier site restoration will be.

3.1 -7 The agreement and terms of use for the Riverside Road access road will be covered under the Road Use Permit Condition # 8.

In general sediment and erosion control should include project perimeter controls such as silt fencing, fiber wattle barriers and/or dikes, and ditches, as needed. To the extent practicable, best management practices (BMPs) will be used to contain, control and screen stormwater from entering the river and associated wetlands and/or riparian areas. Inside the perimeter protection, BMPs will be used to limit and control the velocity of water running over and through the construction site to limit the amount of sediment picked up by stormwater. This will include placing check dams or channel liners in drainage channels, covering high use areas with coarse materials that will allow water infiltration but resist erosion and prevent rutting and mud puddles from forming during storms.

Construction of the New Intake Structure

3.2.1 How and to what degree will the existing rock outcrop in the area by the intake be modified? Incorporate state standards for turbidity as listed in 4.2 if standards are exceeded work should be halted until turbidity can be minimized to acceptable standards.

Water pumped from any in-river excavation or other disturbances should not be placed into any waterbody until it meets Idaho Department of Environmental Quality (IDEQ) water quality standards. The water should be land applied to suitable uplands or stored in settling basins that are large enough to treat all pumped water.

Sealing the Upstream Face of the Dam

3.2.2 Incorporate state standards for turbidity and pH as listed in 4.2 if standards are exceeded work should be halted until turbidity or pH can be minimized to acceptable standards. Cleaning of concrete and grout implements needs to be done at least 50 feet away from the slope break near the edge of the trees and within the confines of a defined area within the staging site. Waste and residue from the cleaning site must be removed and disposed of properly offsite.

Pre-Construction Excavation
3.2.3.1 Include state standards listed in 4.2, if standards are exceeded work should be halted until turbidity or pH can be minimized to acceptable standards. Rock generated by construction activities, such as fishway shelf excavation, may be used for construction purposes. Use of native rocks, such as rocks within the stream channel or dam face, for construction purposes is prohibited. Disturbance to the stream channel should be addressed so that at the end of the project the area looks much like it did at the beginning of the project while insuring the fish ladder functions appropriately.

Construction of the Fish ladder
Berms need to be removed and the area left in a manner that the aesthetics are preserved and the fish ladder functions appropriately. Include state standards for turbidity and pH listed in 4.2 of which if standards are exceeded work should be halted until turbidity or pH can meet state standards.

Staging Area
3.2.7 Hydro mulch is preferred over fiber mats (such as excelsior rolls with plastic mesh) since the plastic mesh is an entanglement hazard for people and wildlife.

Dam Access
3.2.8 Restoration of this area needs to be done in coordination with the site plan. Hydro mulch is preferred over fiber mats.

Construction Area
4.1 Specify certified weed free straw will be used as identified in the revegetation section.

Buffalo River Water Quality
4.2 The Idaho DEQ standard for pH of 6.5-9.0 needs to be incorporated. The lower monitoring site should be within the Buffalo River proper above the confluence with the Henrys Fork. Field monitoring should be done with field calibrated equipment so if standards are exceeded, construction can be stopped immediately and construction methods can be evaluated and changed to ensure standards are met. Any violations along with changes made to avoid further violations shall be reported within one day of the occurrence to the designated Forest Service Inspector and Troy Saffle of Idaho DEQ. Any resulting fish kills and there extent (although not expected) shall be reported immediately to Idaho Fish and Game and the Forest Service. All state standards need to be met.

It is not sufficient to provide continuous monitoring and then report violations post construction. Field monitoring is recommended during times likely to create problems such as: the initial dewatering and building of cofferdams, sheet pile placement and fish ladder construction. Field monitoring of pH is needed during grouting procedures and cement work. The Forest recommends an additional monitoring site or at least grab samples be taken in the immediate discharge area or point of impact.

Upon incorporation of these comments this plan is considered approved.

Temporary Emergency Action Plan (Article #304 - Section B of Construction Plans)

The Forest accepts this plan as written.

Hazardous Substance Plan (Article #404 – Section C of Construction Plans)

2.1 Hazardous Substances to be on Site
Please add: fueling of equipment will occur at least 150 feet from any stream waterbody, except for equipment that is permanently stationed (*i.e.*, crane) or onsite pumps that are continuously running. In these instances precautions will be taken so if spilled, fuel will be contained and contamination prevented. Machinery and implements that are used during the project will be in good repair, and free of excessive leaks. When changing hydraulic lines, care will be taken to keep hydraulic fluid from entering any waterbody or soils. It is recommended as a preventative measure that refueling in the staging area be done within a containment cell.

2.2 Storage and Containment of Hazardous Materials
Locate the hazardous material storage area in the southeast corner of the staging area at least 150 feet from the stream. Fueling and other chemicals, including small fuel cans, oil and hydraulic fluid containers and concrete chemicals, will be stored at least 150 feet from any stream channel, wetland or waterbody and must be fully contained.

2.3 Cleanup and Spill Containment
Spill containment kits, capable of containing the amount of hazardous products capable of being spilt, will be kept at the construction site and used in case of spills. Delete "the contaminated soil will be removed and disposed of in a manner predetermined by the USFS" and replace with "Reporting and Remediation guidelines as required by IDEQ, OSHA, and EPA will be followed."

Upon incorporation of these comments the Hazardous Substance Plan is considered approved.

Fishway and Fish Screen Monitoring Plan (Article # 407 – Construction plans Section D)

2.1 Fish Screen Monitoring
Change first sentence spelling of moralities to mortalities. In addition to recording species, number and length please add likely cause of death such as: angling, impingement, or avian. Predators in the area are likely to key into mortalities if they are occurring and will likely remove many dead fish before they can be enumerated. Observations should include looking for signs of predators (presence, tracks, scat, etc.) and recording these instances. To minimize possible loss to predators, screens need to cleaned and checked early in the morning and late in the afternoon.

Only occasional mortalities are expected. If high numbers of mortalities are observed these will be reported immediately. Reporting of mortality data is requested to be given in an electronic format using Microsoft Excel or in a format capable of being imported easily into Excel.

2.2 Fish Ladder Monitoring

Please add a sentence stating that the licensee shall be responsible for the term of the license to ensure proper function of the ladder. The ladder shall be considered properly functioning when it is working as designed with the orifices and auxiliary intake being free of debris with a uniform depth of water over each weir and the entrance submerged to the proper depth with sufficient flows to provide attraction to the entrance. Proper function of the ladder needs to be assured daily and documented on a weekly basis with frequency and type of problems reported.

The fish trap that is to be installed at the exit of the fish ladder needs to conform to the following:

- have a screen or vertical opening of no greater than 5/8"
- be 3-5 feet wide and at least 5 feet long to provide refuge from intake
- be secured to prevent tampering with access provided to IDFG, HFF, and USFS,
- designed to allow processing in the dry
- have a secured opening where fish can pass quickly through when not being captured
- be designed so as to prevent fall back into the fish ladder of trapped fish
- be designed to allow crowding of the fish to ensure efficient capture for processing
- be removable
- designed so flows to the ladder can be shut off for maintenance or inspection

Under licensee responsibilities, please add that modifications to flow patterns below the dam could include minor restructuring of the dam face or approach channel to assure efficient attraction and passage. If sealing of the dam is not successful and a majority of water continues to leak through the dam it may be necessary to alter portions of the channel below the dam to facilitate fish finding the ladder.

As mentioned in NPSI April 15, 2004 letter the ongoing cooperation with HFF concerning the video monitoring is expected to continue. In this same spirit of cooperation it is expected that if agencies or NGO's wish to further investigate questions concerning the effects of the Buffalo River Hydroelectric Project that the licensee would provide assistance through on-site personnel.

3.0 Agency Cooperation and Design Modifications

It is requested that NPSI's April 15, 2004 letter regarding monitoring be incorporated by reference into the monitoring plan.

Upon incorporation of these comments the Fishway and Fish Screen Effectiveness Monitoring, Evaluation, and Maintenance Plan is considered approved.

Condition No. 15 - Diversion Operation Plan (Article #410 – Construction Plans Section E)

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

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

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

Continued equipment access across the dam post construction has not been approved. It would be prudent during construction to incorporate other methods to pass large debris through the spillway such as a winching system.

Fine sediment is currently flushed during periods of high runoff. We agree sediment flushing is not an issue given past operation and stream type.

As part of the maintenance plan ensure that the spillway is kept free of debris that could hinder its effectiveness during high flow events. All debris needs to pass beyond the concrete sill and at an elevation below the concrete apron. The fish ladder is likely to provide a new catch point for debris. This debris may need to be passed on to minimize erosion and conflicts with ladder operation.

Upon incorporation of these comments the Diversion Operation Plan is considered approved.

Condition No. 7 – Public Safety Plan (Construction Plans Section F)

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

The Licensee shall perform daily (or on a schedule otherwise agreed to by the Forest Service) inspections of Licensee's construction operations on National Forest System lands while construction is in progress. The Licensee shall document these inspections (informal writing sufficient) and shall deliver such documentation to the Forest Service on a schedule agreed to by the Forest Service. The inspections must include fire plan compliance, measures to provide for public safety, and environmental protection. The Licensee shall act immediately to correct any items found to need correction.

This plan is to identify potential hazardous situations, evaluate all project facilities for conformance with the International Building Code, and identify measures necessary to bring project facilities in conformance with the Code, and shall include a schedule for completion of any hazard abatement measures. The plan will also identify how the project complies with FERC's Guidelines for Public Safety at Hydropower Projects (March 1992). The Forest has no knowledge or evidence that this has been completed.

The Forest has the following additional comments:

- Reference within Safety Plan what standards are being followed for example OSHA, Manual of Uniform Traffic Control Devices (USDOT), or local ITD standards.
- Correct spelling in the plan from sight to site.
- It should be stated that the area will be signed and closed to public access during construction at an appropriate turnaround location such as the snowmobile parking area or intersection of road from the Box Canyon Campground. Area closure signing needs to be coordinated with issuance of a Forest Service Closure Order for the site.
- To facilitate public safety and awareness post weekly a construction schedule at the snowmobile parking area and provide a copy to the Island Park Forest Service Office.
- Local residents will need access to summer homes.
- Roads and highways should be signed as appropriate to comply with federal and state highway standards for construction and heavy truck traffic.
- As warranted signs should be posted upstream with appropriate warnings.
- Documentation of inspections and compliance shall be provided twice a week for the project inspector on Monday and Thursday.
- A sign stating there is "no designated take out ahead" needs to be placed near Highway 20 or canoe takeouts need to be allowed at the project site if it is safe to do so.

Until compliance with paragraph one of this condition has been satisfied and the additional comments included this plan is not approved.

Condition No. 10 - Recreation Plan (Construction Plans Section G)

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

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

In general, the Recreation Plan as stated in section G is an outline of objectives to be included in the site plan that is to be developed. In general we agree with these objectives with some exceptions. The Forests objectives for this site are as follows:

- Parking Lot - A gravel surface parking lot with six parking spaces. Located on the southwest side of existing loop on the end of the road. Parking lot will include rock parking barriers that are partially buried. (Precautions will need to be taken to preserve the island that exists in the loop drive on the end of the road prior to construction.)
- Trailhead Bulletin Board - A 4 by 6 foot wood bulletin board mounted on treated 4"x4" posts. This would be located next to the parking lot at the Box Canyon Trailhead.
- Interpretive Trail/Overlook and Signs - A gravel surface trail from the parking lot to the overlook where 2-3 interpretive signs would be placed that provide interpretation for the hydro project. This trail and overlook would be accessible with a gravel surface of 3/4" minus gravel. The location for this overlook and signing is tentatively identified as an area just below the dam on a naturally occurring shelf above the river.
- Trail to Dam - A trail from the parking lot to the dam that is constructed of treated timber steps (if needed) that are backfilled with 3/4" minus gravel. (It may be possible to just gravel the trail depending on the grade of the trail)

No formal consultation has occurred between the licensee and the Forest Service regarding the preparation of the recreation plans. And to our knowledge the site plan

requested in Condition No. 10 has not been prepared by the licensee or approved by the Forest Service.

Until such time that these requirements have been met through a reiterative planning process the Recreation Plan is not approved.

Condition No. 12 - Heritage Resource Protection (Construction Plans Section H)

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

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

Under procedure 2 add the additional contact:

Caribou-Targhee National Forest
Ali Abusaidi Forest Archaeologist
(208)-557-5777

Upon the addition of this contact information the Heritage Resource Protection Plan is considered approved.

Condition No. 13 - Scenery Management (Construction Plans Section I)

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

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

Mitigation measures shall include, but are not limited to:

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

In general this plan is vague and will need more detail before it can be approved We need to know what is going to be removed or added and how those changes may affect the appearance of the site. It may work well to incorporate this plan with the site plan requested in the Recreation Plan to provide a visual sense of what will occur. The revegetation plan is also a critical component of mitigation that should be integrated.

3.1 Intake Structure and Fish Screens

The plan should indicate what the concrete structure will look like in terms of surface treatment and color. The Forest recommends that the concrete be cast to resemble adjacent rock surfaces (to match the fish ladder structure) in terms of pattern, texture and color. All exposed concrete needs concrete dye mixed throughout. Please provide additional information regarding the height of the proposed mechanical screen cleaner or on its visibility from the Henrys Fork.

3.2 Sealing the Dam Face

The steel sheet piles that are proposed need to be of a type of steel that will readily rust or darken to blend into the surroundings. Please provide details on how the top edge is to be finished.

3.3 Re-texturing the Powerhouse

It is our understanding that Kodiak Black is the color of the existing block powerhouse and that the exposed concrete will be stuccoed in a suitable color that blends the exposed concrete with the block and lava outcrops. In addition if practical, please add shrub, tree plantings or large rocks around the foundation to give a lower profile to the structure as well as hide some of the foundation.

3.4 Parking and Staging Area

A site plan needs to be prepared and approved.

3.4 Fish Ladder

Alternative 1 as depicted in the final fishway design submitted March 11th is the preferred design. We have the following additional comments:

1. Match the color of the exposed concrete structure to the natural color of the surrounding basalt rock using dyed concrete for all visible surfaces.
2. Provide *horizontal relief* and *texture (varied depth of the face of the wall on a large scale to make use of natural light and shadow)* along the exposed vertical concrete surfaces as exists in the natural faces occurring in the area. Drawing number 2 depicts a 3" depth to provide texture in the wall. Depth should be varied across the face of the wall from as little as 3" to as much as 6" to take the most advantage of natural light and shadow to blend into the natural surroundings. Alternative 1 indicates a rough textured surface that is not obvious from drawing 2. The surface should contain as much texture as depicted in alternative 1.
3. Please provide *random* blocking along the vertical concrete surfaces to closely match the natural faces occurring in the area. The natural landscape in the river corridor is a combination of angular, irregular sized rectangular blocks and angular, irregular shaped boulders in a columnar and boulder arrangement. The final exterior of the fishway wall should be a combination of all of these elements: angular, irregular sized rectangular blocks, angular, irregular shaped boulders, a columnar pattern and a boulder like pattern matching the natural pattern behind the ladder.
4. The alternative 1 artist's rendition random relief pattern appears closer together than the 6" to 12" indicated in drawing 2. The artist's rendition is preferable than what appears to be wider spacing in drawing 2.
5. Please provide *random* vertical or edge relief along the top of the horizontal surfaces of the concrete *to break up the visual line*, similar in relief to surrounding natural surfaces. The top of the wall will be 7 ½" wide according to drawing 2 and still allow for steel grating. This 7" portion of the wall must be randomly broken up horizontally to eliminate the unnaturally straight line. Straight lines and angles, along with random heights and lengths along the top of the wall would be sufficient. Too much symmetry should not be incorporated so it does not appear like the top of a castle wall.
6. The north elevation of the ladder in drawing 2 does not show any of the random relief patterns overlapping the top edge of the wall. Overlapping should occur randomly (so only a portion of the boulder/block is created) to help mimic the natural environment.
7. Native rock removed during construction should be backfilled along the base of the fishway in the river to hide the foundation.
8. The river channel west of the fishway and south of the dam should not appear to be dredged clean of native materials. Native rock and debris should be placed back in the river after construction on the dam is finished.
9. The east side of the ladder needs to "hug" the bank/rock wall as much as possible. Then rock can be placed behind and up to the top of the ladder wall. It will tie the ladder into the existing landscape and look much more natural from all viewing angles.
10. If feasible willow plantings and other shrubs could be planted in between the rocks next to the walls. This would help break up the long flat horizontal surface of the walls.

Condition No. 17 - Vegetation Management Plan (Construction Plans Section J)

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

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

The Vegetation Management Plan is considered approved upon incorporation of the recommendations.

Section J - 8, Table 3. The Forest suggests removing sheep fescue (Festuca ovina) and elk sedge (Carex geyerii) from the seeding mix. The available cultivars of sheep fescue are all non-native and elk sedge should come in on its own and would be extremely expensive to purchase as seed - if found available. Increase the percentage of slender wheatgrass to replace sheep fescue and elk sedge.

There should be a section or paragraph detailing the quality and point of origin of seed and seedlings used. All seed needs to be certified weed free.

The number of shrubs to be used seems very extensive for the level of disturbance. Instead we recommend that the site be prepared and seeded the first year and plant the shrubs the next year if needed as determined by monitoring, i.e. are there shrubs and trees resprouting and establishing on their own. To preserve local site adaptations it is recommended that local stock be used or transplanted from approved surrounding locations. Topsoil should only be removed and stockpiled if absolutely necessary for construction. For example revegetation would be more effective for the concrete truck

access for the fishway if topsoil could be left in place and then ripped post construction. This would preserve the native seed bank and allow resprouting of some shrubs.

The Revegetation Plan may need modification through the Scenery Management Plan as there may be areas where the concern is more over visuals than erosion. For example from a visual standpoint we may request fewer and larger shrubs strategically placed.

Ripping should be done to a depth of at least 12 inches or to the depth practical where bedrock occurs.

Condition No. 18 & 19 BE and BA for Threatened, Endangered, and Sensitive Species (Construction plans Section K)

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

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

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

Condition No. 19 – Forest Service Sensitive Species Biological Evaluation

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

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

The US Fish and Wildlife Service have accepted the determinations for Threatened and Endangered species.

The BE for Forest Service sensitive species is lacking in some details, however, we do not disagree with the determination of effects and we will consider the plan approved upon incorporation of the following changes.

Yellowstone cutthroat is also a sensitive species that occurs within the Henrys Fork and needs to be addressed in the BE. A "May Impact" determination would be appropriate.

Incorporate a summary table that displays the determinations for all sensitive species such as the one below.

Species	No Impact	May Impact Individuals Or Habitat, But Will Not Likely Contribute To A Trend Towards Federal Listing Or Loss Of Viability To The Population Or Species	Will Impact Individuals Or Habitat With A Consequence That The Action May Contribute To A Trend Towards Federal Listing Or Cause A Loss of Viability To The Population Or Species	Beneficial Impact
Yellowstone Cutthroat		X		

Fishway Design Comments

Upon incorporation of the following comments the Forest Service considers the Fishway Design approved.

- The 4-6 inch rock to be placed within the ladder needs to specified as 4-5" rounded river cobble.
- Drawings need to show water intake detail. There is no indication of how flows into ladder will be controlled or shut off.
- A short Guide wall (5 feet) at the exit is needed to guide fish away from entrainment into spillway or auxiliary flows to eliminate fall back. The fish trap will provide this ability when it is installed but, if it is not to be left permanently a guide wall will need to be constructed.
- Profile two on sheet 10 of 12 appears to be in error as the streambed profile is above the top of the weir.
- There is a risk that the 45 degree angled wall upstream of the fishway entrance will create a back eddy at the entrance disorienting fish and impeding the ability of fish to detect the entrance to the fishway. It is suggested to shorten the length

of wall that extends out into the pool, turn the entrance downstream, or lessen the angle of the wall so it is more parallel with the flows.

- Auxiliary water entering the last (bottom) pool needs to have a diffuser installed so maximum velocities are 1 foot per second or less so fish are attracted to the weir and orifice not the auxiliary water inflow.

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THE HENRY'S FORK FOUNDATION, INC.

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April 22, 2005

Brent Smith
Northwest Power Services
PO Box 535
Rigby, ID 83422

RE: Buffalo River Hydroelectric Project, FERC Project #1413 Articles 405, 406, and construction plans.

Dear Brent:

The Henry's Fork Foundation (HFF) has received your letters of March 11th, 16th, and 22nd of 2005, requesting comments on proposed work identified in the license for FERC Project #1413. These three letters concern: 1) article 405 (proposed fishway design), 2) construction plans, and 3) article 406/Condition No. 14 (proposed fish screen on the powerhouse intake). The HFF offers the following comments for each of these three letters:

1) Article 405, fishway design

In general, the design characteristics of the fish ladder, i.e., the length, gradient, and predicted water velocities within, are all very conducive to the objective to pass four inch rainbow trout, at a minimum.

Will the plate on the side spill need to be adjusted manually to regulate flow in the ladder and will the side spill be managed in conjunction with a headgate (no detail is given for the exit of the ladder)? Similarly, no design (i.e., a guidewall) is shown for a means of preventing fish that exit the ladder from falling back over the adjacent spillway. Furthermore no design is presented for the fish trap to be constructed at the ladder exit. Please incorporate the designs of the above into your diagrams.

The 8" axillary water pipe that is situated along side the wall to the entrance of the fish ladder should likely be extended so that it is even with the end of the wall and the entrance. As currently designed, fish may be attracted to the axillary flow outlet and bypass the ladder entrance. Fish attraction to the axillary flow may be further lessened if a diffuser is installed on the outlet to the axillary flow.

The current sill, water flow, or both, that is downstream of the spillway should be modified so that fish are not attracted to or able to navigate upstream in this direction. Adult rainbow trout currently navigate in this direction to enter the orifice of the existing fishway. The proposed fish

ladder would have no means to pass fish around the dam if they migrate upstream past the proposed ladder entrance. If a blockage or impediments were placed downstream of the spillway then fish would then be more likely to enter the fish ladder rather than spending time and energy trying to navigate towards the spillway.

It is recommended that the notch on the top of the weirs and the orifices through the weirs be located on the same side of the pools within the fish ladder. This should provide for better orientation of the fish moving upstream in addition to providing resting areas on the opposite side of the pools.

It has come to my attention, by way of Lee Mabey's consultation with Brent Mefford (BOR Hydraulic Engineer), that the 45° angle of the ladder entrance may be problematic and that the angle should be lessened. Brent Mefford's suggestions of shortening the length of wall that extends into exit pool and turning the entrance downstream so that it is more parallel with the flow should be incorporated into the design.

2) Construction plans

Erosion Control Plan

3.2.3.2 Construction of the Fish Ladder:

Daily grab samples will be taken downstream of the fish ladder during construction. Where and when will the grab samples be taken?

4.2 Buffalo River Water Quality:

A compliance report of water quality monitoring will be furnished to the listed organizations three months after completion of the project. However, no mention is made of providing water quality information to the organizations during the construction phase. It is recommended that this information be made available to the organizations on a weekly basis during the construction.

Fishway and fish screen effectiveness monitoring, evaluation, and maintenance plan

2.1 Fish Screen Monitoring:

It is recommended that water velocity measurements be taken in front of the fish screen to evaluate if approach velocities meet the 0.8 feet per second for which the screen is designed.

2.2 Fish Ladder Monitoring:

No mention is made on the installation and maintenance of the video recording camera in the fish ladder. This camera (Henry's Fork Foundation equipment) had been used in the existing fish ladder to document upstream fish movement and was maintained (changing video tapes, etc) by the hydroelectric facility personnel. Furthermore, it is noted in Northwest Power Services letter of April 15, 2004 in appendix D-1 of this section of the plan that: " operating personnel....maintain recording equipment...for a period of three years..". Please include this language in the body of the construction plan document.

Data collected from the fish trapping at the ladder will be reviewed after one year. This review is proposed to help guide sampling when it is most efficient, i.e, data collection can be consolidated when the ladder is most used. In addition, it should also be included that data collection, i.e., frequency of trap checking, could potentially be expanded, when the fish ladder is most used.

It is also recommended that upon completion of the fish ladder that flow and velocity measurements are taken at several places within the ladder. This would allow an evaluation of the velocities predicted by the design criteria within holding pools and at orifices.

One of the primary objectives of facilitating better fish passage upstream of the Buffalo River hydroelectric project is to allow fish access to habitat in the Buffalo River, i.e., winter rearing habitat, which may be limiting in the Henry's Fork River. This access should facilitate increased recruitment of age 1-year old rainbow trout to the Henry's Fork River. As such, part of the objective of the dam modifications is to not only enhance upstream fish passage, but also to facilitate downstream passage. Therefore, some consideration should be given to an evaluation of the outmigration of juvenile trout at the Buffalo River hydroelectric facility. Previous attempts by the Henry's Fork Foundation to monitor juvenile outmigration were not very successful because of the difficulty of sampling in the Buffalo River upstream of the hydroelectric facility. In addition, sampling at the dam was inefficient because of the movement of fish into the turbine intake or under the dam. The proposed work on the facility such as: installing a smaller screen on the turbine intake and sealing the face of the dam should provide an enhanced opportunity to determine the outmigration of fish at the dam. This is especially important given that upstream passage should be greatly enhanced with the proposed fish ladder. Given the above, it is recommended that the operating personnel be made available to check an outmigrant trap if this type of sampling is deemed valuable by the reviewing organizations at a later date.

Recreation Plan

Will the Box Canyon trailhead at the parking area be accessible for hikers during the construction? If so, will a parking area be designated for these users during construction?

3) Article 406/Condition No. 14, proposed fish screen

The design of the proposed fish screen (1/4 inch mesh size with a large overall surface area of the screen) appears to address the desire to keep approach velocities around 0.8 feet per second. As noted above, upon completion of the intake structure then velocity measurements should be taken to verify that these screen criteria do result in the desired approach velocities. In addition, detailed records should be kept of any fish mortalities or impingments on the screen.

Thank you for informing the HFF about these license requirements and considering our comments.

Sincerely,

Jim De Rito
Conservation Director
Henry's Fork Foundation

cc: Lee Mabey, USFS
Gary Vecellio, IDFG
Scott Christensen, GYC

United States Department of the Interior
FISH AND WILDLIFE SERVICE
Snake River Fish and Wildlife Office
1387 S Vinnell Way, Suite 368
Boise, Idaho 83709

TAKE PRIDE IN AMERICA

MAY 05 2005

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

Subject: Buffalo River Hydroelectric Project, Fremont County, Idaho
-- Comments on Final Fishway Design
FERC #1413-032 OALS #05-0525

Dear Mr. Smith:

The Fish and Wildlife Service (Service) is writing to provide comments on the final design for the Buffalo River fishway (fishway). We received the final design and request for comments on March 14, 2005. We recognize that these comments will be received after the 30 day comment period you requested in your letter, and we request that they be considered to the extent possible. The Service is providing comments pursuant to our authorities under the Federal Power Act, as amended (16 U.S.C. 791 et seq.) and the Fish and Wildlife Coordination Act (16 U.S.C. 661 et seq.).

The final fishway design proposed by Northwest Power Services, Inc., is intended to meet the requirements of Article 405 of the Subsequent License for the Buffalo River project issued by the Federal Energy Regulatory Commission on November 5, 2004. Based on our review, the final design meets the fish passage criteria previously recommended by the Service, USDA Forest Service, and Idaho Department of Fish and Game. The Service has the following two comments on the final design.

1. A short guide wall (e.g., 5 feet) located at the fishway exit is necessary to guide fish away from the spillway and auxiliary flows to prevent fall back and increase passage effectiveness. If the fish trap used for monitoring is left in place permanently a guide wall would not be necessary.

2. It is possible that the 45-degree angled wall at the entrance to the fishway may create a back eddy when higher flows occur, which could make it difficult for fish to detect the entrance of the fishway. This could be remedied by shortening the length of the wall, or by turning the entrance downstream, thereby lessening the angle and orienting the wall more parallel with the river flow.

The Service appreciates the Applicant's cooperative approach, and looks forward to continued discussions regarding this project. If you have any questions regarding our commer ts, please contact Kendra Womack at (208) 685-6955.

Sincerely,

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

cc: FWS, Chubbuck (Deb Mignogno)
CTNF, Idaho Falls (Lee Mabey)
IDFG, HQ-Boise (Scott Grunder)
IDFG, Idaho Falls (Gary Vecellio)
FERC, Washington DC

United States Department of Agriculture | Forest Service | Caribou-Targhee National Forest | 1405 Hollipark Drive Idaho Falls, ID 83401 208-524-7500

File Code: 2770
Date: July 11, 2005

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

Re: Buffalo River Hydropower Project, FERC Project # 1413

Dear Brent:

The USDA Forest Service has received for review and comment the updated Recreation and Scenery Management Plans in your letter dated May 16, 2005. The Forest Service approves the Recreation and Scenery Management Plans as sufficient to meet Conditions No. 10, and 13(Article 401) of the license. This approval is based upon the Licensee's agreement with our previous comments and there incorporation into the plans.

Condition 11, Interpretive Display Plan, has been incorporated into the Recreation Management Plan. That plan relative to placement of the sign is approved. As agreed to at our May 27, 2005 meeting, the exact wording of the interpretive sign will be submitted to the Forest Service for approval.

We appreciate the opportunity to review these plans.

If you have any questions or need additional information, please contact Lee Mabey, Team Leader at (208) 557-5784.

Sincerely,

WES STUMBO
Acting Forest Supervisor

Document Accession #: 20050727-0185 **Filed Date: 07/26/2005**

Document Content(s)