



United States Department of the Interior

OFFICE OF THE SECRETARY
Office of Environmental Policy and Compliance
620 SW Main Street, Suite 201
Portland, Oregon 97205-3026



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IN REPLY REFER TO:
ER11/303

Electronically Filed

August 1, 2011

Honorable Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street, N.E.
Washington, DC 20426

Subject: **MODIFIED SECTION 18 PRESCRIPTIONS FOR FISHWAYS** – Wells Hydroelectric Project, Project No. 2149-152, Columbia River, Douglas and Chelan Counties, Washington (ER11/0303)

Dear Ms. Bose:

The United States Department of the Interior (Department) hereby submits modified Prescriptions for Fishways (Prescription for Fishways) for the Wells Hydroelectric Project, Project No. 2149-152, pursuant to Section 18 of the Federal Power Act, as amended. The Department's modified Prescriptions for Fishways have been duly processed in accordance with the Department's regulations at 43 CFR Part 45. With this and previous filings, the supporting administrative record for these fishway prescriptions is on file with the Federal Energy Regulatory Commission (Commission).

Section 1. Background

On May 27, 2010, the Public Utility District No. 1 of Douglas County (Licensee), the licensee for the Wells Hydroelectric Project (Project), filed an Application for New Major License. On August 10, 2010, and corrected on August 19, 2010, the Commission issued its *Notice of Application Accepted for Filing, Soliciting Motions to Intervene and Protests, Ready for Environmental Analysis, and Soliciting Comments, Recommendations, Preliminary Terms and Conditions, and Preliminary Fishway Prescriptions* (REA Notice).

The Department prepared and processed its Preliminary Prescriptions in accordance with the Department's regulations at 43 CFR Part 45. Specifically, the Preliminary Prescriptions were prepared using a process that included consultation among fisheries biologists and fishway engineers from the U.S. Fish and Wildlife Service (Service), the Bureau of Land Management (BLM), the Bureau of Indian Affairs (BIA), the National Marine Fisheries Service (NOAA Fisheries), Washington Department of Ecology (Ecology), Washington Department of Fish and

Wildlife (WDFW), the Confederated Tribes and Bands of the Colville Reservation (Colville Tribes), the Confederated Tribes and Bands of the Yakama Nation (Yakama Nation), and the Licensee. During that process, the Department considered the record before the Commission; it also considered scientific evidence not already in the record and subsequently filed that supplemental evidence into the record before the Commission. Finally, in response to the Commission's REA Notice, the Department filed its comments and Preliminary Prescriptions on October 6, 2010, including an index to the administrative record supporting the Department's Preliminary Prescriptions.

The Department's regulations at 43 CFR Part 45, provide that any party to a license proceeding before the Commission, in which the Department exercises mandatory authority, is provided both a) the right to trial-type hearings on issues of material fact, and b) the opportunity to propose alternatives to the terms contained in the Preliminary Prescriptions. The deadline for filing any trial-type hearing requests and/or alternative prescriptions was November 17, 2010. No requests, nor alternative proposals, were received.

Had any request for trial-type hearing been filed, other parties could file interventions and responses within 15 days of the date of service of the request for a hearing (43 C.F.R. § 45.22). If a request had been filed, a hearing would have been conducted, and a modified Prescription for Fishways would have been prepared, in accordance with the terms and time limits of 43 C.F.R. Part 45. Likewise, had any alternative proposals been filed, they would have been analyzed in accordance with 45 C.F.R. § 45.73.

On April 6, 2011, the Commission issued the Draft Environmental Impact Statement (DEIS) for the Project. The DEIS did not include a significant portion of the Department's Preliminary Prescriptions in the Staff Alternative. The DEIS was particularly dismissive of conditions prescribed for the safe and timely upstream and downstream passage of Pacific lamprey. We considered these comments in the development of our modified prescriptions and address them below in this document. We found no information or substantial evidence that would lead us to reconsider our preliminary prescriptions and the underlying Aquatic Settlement Agreement entered into by numerous parties (including the Service) on May 27, 2010. No other comments were received regarding the merits or substance of the Department's Preliminary Prescriptions for Fishways.

Because no party requested a trial-type hearing, no party filed alternative conditions, and no new information or substantial evidence was presented in the DEIS or received by the Department that would lead us to reconsider our preliminary prescriptions, the Department hereby adopts the Preliminary Prescriptions for Fishways filed with the Commission on October 6, 2010, essentially unchanged as its modified Prescriptions for Fishways, pursuant to 43 C.F.R. §45.73.

This decision in no way limits or affects the Department's authority, pursuant to section 18 of the FPA, to modify its Fishway Prescriptions during the life of the license, in accordance with the Reservation of Authority already on file with the Commission and restated below. This filing is solely intended to indicate that the Department is satisfied that our Preliminary Prescriptions for Fishways are sufficient for the Commission's forthcoming decision on issuance of a new license for this project. We further note that our Preliminary Prescriptions for Fishways, as finalized by

this filing, are intended to implement the Wells Aquatic Settlement Agreement (Wells Aquatic SA) without material modification.

For clarity and convenience, we have attached to this document our final fishway prescriptions for the Project. These final fishway prescriptions use the same language and number scheme as contained in the proposed license articles filed with the Commission by Licensee on May 27, 2010.

Section 2. Project Description

The modified prescriptions for fishways attached to this document apply to the Licensee's Wells Hydroelectric Project located at river mile 515.6 on the Columbia River in the State of Washington. The Project includes ten generating units with a nameplate rating of 774,300 kilowatts. The design of the Project is unique in that the generating units, spillways, switchyard, and fish passage facilities are combined into a single structure referred to as the hydrocombine. Adult fish passage facilities reside on both sides of the hydrocombine, which is 1,130 feet long, 168 feet wide, with a crest elevation of 795 feet in height. Juvenile fish passage facilities are located across the powerhouse of the dam. The fish bypass system uses a barrier system to modify the intake velocities on spillways 2, 4, 6, 8, and 10. The bypass system on average collects and safely passes 92.0 percent of the spring migrating salmonids (yearling Chinook, steelhead, and sockeye) that arrive at the dam and 96.2 percent of the summer migrating subyearling Chinook that arrive at the dam.

Section 3. Resource Management Goals and the Need for Fishways

In our October 6, 2010, filing we described the affected fishery resources and resource management goals, and indicated the need for fishways. The Department's goal is to maintain and improve fish passage and fish passage conditions at the Project for upstream and downstream migrants as necessary to fulfill the objectives of the Federal, regional, and State management plans described in the aforementioned filing. This goal includes avoiding and minimizing the loss of fish from the operation of proposed upstream and downstream fish passage facilities, including fish screens and bypass systems. To meet this goal, the Licensee must maintain project facilities that provide an overall survival and passage efficiency rate for upstream and downstream migrants that are at the highest level technically possible, while remaining reasonably and economically feasible.

We also seek to maintain the full complement of native fish within their historic habitats within the mid-Columbia River Basin. To accomplish this goal, successful fish passage for spring, summer, and fall Chinook salmon, sockeye salmon, coho salmon, steelhead, (Plan Species), and for Pacific lamprey and bull trout (non-Plan Species) is needed throughout the term of the new license. This goal is consistent with the direction of existing State and Federal agency management plans. These State and Federal plans call for the recovery and long-term sustainability of harvestable native fishery populations, including Pacific lamprey, as a priority. Accomplishing this goal will require the operation and maintenance of effective, safe and timely fishways at the Project. Without the continued operation of effective fishways at the Project, negative impacts to resident and anadromous species will continue. Effective and well-

maintained fishways will also ensure that the Project does not impair future efforts to restore fish production in the mid-Columbia River Basin and will contribute to the maintenance of fish populations.

Section 4. Statutory Authority

Section 18 of the FPA states in part that “the Commission shall require the construction, maintenance, and operation by a licensee of . . . such fishways as may be prescribed by the Secretary of Commerce or the Secretary of Interior.” Section 1701 (b) of the National Energy Policy Act of 1992, P.L. 102-486, provides guidance as to what constitutes a fishway. Section 1701(b) states, “The items which may constitute a ‘fishway’ under section 18 for the safe and timely upstream and downstream passage of fish shall be limited to physical structures, facilities, or devices necessary to maintain all life stages of such fish, and project operations and measures related to such structures, facilities, or devices which are necessary to ensure the effectiveness of such structures, facilities, or devices, for such fish.”

In accordance with the FPA, the Commission is required to include, without modification, fishways prescribed by the Secretaries of the Interior and Commerce. This has been recognized and upheld by the Federal courts, including the Supreme Court (See *Escondido Mutual Water Co. v. La Jolla Band of Mission Indians*, 466 U.S. 765 (1984); *American Rivers v. FERC*, 201 F.3d 1186 (9th Cir. 1999); *Bangor Hydro-Electric Co. v. FERC*, 78 F.3d 659 (D.C. Cir. 1996)). As such, final approval of plans, specifications, measures, study designs, and reports associated with our fishway prescriptions for these species, or any other fish species under our purview that utilizes the Project, remains with the Secretary of the Interior.

Section 5. Relicensing Proceeding

The Department has participated in the relicensing process for this project since 2005. On December 1, 2006, the Licensee filed with the Commission a Notice of Intent to relicense the Project and a Pre-Application Document which employed the Commission’s Integrated Licensing Process (ILP). The Licensee convened numerous meetings in subsequent years to implement the collaborative ILP. These meetings were followed by a series of public meetings to establish the structure and ground rules for a collaborative process, the goals and objectives of the participants, and a communications protocol. Through these meetings, the participants established various work groups to study and address particular resource issues. The Aquatic Settlement Work Group (Aquatic SWG) was established to address aquatic resource and fish passage issues and began meeting informally in 2005 and formally in 2007.

Negotiation, policy, and legal groups were formed to develop the Wells Aquatic SA for the implementation of long-term conservation measures associated with aquatic resources in the Project. Interest-based settlement negotiations with stakeholders representing Federal and state resource agencies, Indian tribes, non-governmental agencies, the Licensee, and others, continued over the next several years, covering a broad array of aquatic issues. On May 27, 2010, the Licensee filed an application for a new license to operate and maintain the Project. The Wells Aquatic SA is a vital component of this license application.

In preparation for the issuance of the Commission's REA Notice, we developed draft preliminary fishway prescriptions that were reviewed by the Licensee, in addition to other agencies and Tribes. We received comments from the Licensee and BIA. In response, we met with the Licensee, BIA, and the relicensing resource work groups to address their concerns. During these meetings, the issues raised by the Licensee and BIA regarding our draft preliminary prescriptions were resolved. All language changes were scrutinized to maintain consistency with the Wells Aquatic SA.

On October 6, 2010, the Department filed its Preliminary Prescriptions with the Commission. The Department's Preliminary Prescriptions were designed to provide for the safe and timely upstream and downstream passage of native fish species including salmon, steelhead, bull trout, and Pacific lamprey.

Section 6. Fish Passage Options Adopted in the Department's Modified Fishway Prescriptions

The fish passage options adopted in the Department's modified prescriptions for fishways were developed collaboratively with the Licensee, BIA, NOAA Fisheries, the Aquatic SWG, and affected Tribes, and are intended to be consistent with the terms of the Wells Aquatic SA and its accompanying Bull Trout Management Plan (BTMP) and Pacific Lamprey Management Plan (PLMP). An overview of these options and accompanying discussions is provided in the Wells Aquatic SA, its Explanatory Statement, and the attachments to the Wells Aquatic SA that are part of the record before the Commission. These options are further described in the management plans and proposed license articles contained in the Wells Aquatic SA and accompanying Final License Application (FLA) filed with the Commission on May 27, 2010. Finally, the Department's rationale and justification for its preliminary prescriptions, which are equally applicable to the modified prescriptions adopted herein, are contained in the Department's comments and administrative record filed on October 6, 2010. These documents are hereby incorporated by reference.

To summarize, the Licensee will operate the Project's upstream and downstream fish passage facilities in accordance with the terms of the Wells Anadromous Fish Agreement and Habitat Conservation Plan (Wells AFA/HCP) for salmon and steelhead (Douglas PUD 2002). Under those terms, the Licensee will prepare an annual Fish Passage Plan (FPP) in consultation with the Wells HCP Coordinating Committee. The FPP provides the details of operations and procedures necessary to safely pass fish through the Project and meet the standards agreed upon in the Wells AFA/HCP. The FPP includes the operations, maintenance, inspection and reporting procedures for the upstream and downstream fish passage facilities, turbine unit operations and spill management for upstream and downstream passage, water quality monitoring and control, fish counting procedures, and predator control measures. The Department incorporates the terms of the Wells AFA/HCP into its modified fishway prescriptions for salmon and steelhead.

The Licensee will also operate the Project's upstream and downstream fish passage facilities in accordance with the terms of the Wells AFA/HCP as the principal method for providing upstream and downstream passage for bull trout. Upstream passage is provided by two fish ladders, each with a single entrance in the tailrace, and two exits in the forebay. Downstream

passage routes available to bull trout include: (1) passage over spillways during spill periods (generally between April and August); (2) the Juvenile Bypass System consisting of five modified spillways (operated between April 12 and August 26); (3) two adult fish ladders; and (4) ten turbine units.

In addition, the Licensee's proposed BTMP includes the development and implementation of a monitoring program to identify potential project-related impacts on the upstream and downstream passage of adult and sub-adult bull trout through the Wells Dam and any incidental take of bull trout. If upstream or downstream passage problems are identified by monitoring, then the Licensee will collaborate with the Service, NOAA Fisheries, and the Aquatic SWG to identify and implement reasonable and feasible options to modify upstream and downstream passage facilities or operations that reduce the identified impacts to bull trout passage. The monitoring program is described in the Wells Aquatic SA and associated comprehensive BTMP (Douglas PUD 2010). The BTMP was developed to satisfy the requirements of the Service's Biological Opinion (BO) for the relicensing of the Project. While the Licensee's proposed BTMP contains provisions designed to quantify incidental take of bull trout at the Project under the Endangered Species Act (ESA), it also contains specific fish passage measures designed to provide safe, timely, and effective passage of this fish species at the Project.

To define the effectiveness of these measures for bull trout at the Project's fishway facilities, the Department's fishway prescriptions for bull trout stipulate performance standards. These performance standards include a 90% Passage Success and 95% Passage Survival metric for the upstream and downstream passage for adult and sub-adult bull trout. The performance standard is based on the Licensee's 8 years of bull trout radio telemetry data at the Project, in which tagged bull trout passed safely upstream and downstream of the Project (BioAnalysts, Inc., 2004; LGL and Douglas PUD 2008a). This information demonstrates that a total of 93 upstream passage events by radio-tagged bull trout were detected at Wells Dam. Out of all 93 upstream passage events recorded, no bull trout mortality was attributed to passage at the Project. During the same study, a total of 27 downstream passage events by radio-tagged bull trout took place at Wells Dam. Radio-tagged bull trout passed downstream through the turbines or spillways and no downstream passage events were recorded via the fishways. Out of all the downstream passage events recorded, no bull trout mortality was observed.

The bull trout passage standard is also supported by numerous years of data related to the upstream and downstream passage of salmon and steelhead species (Douglas PUD 2010). At this time, the Department has determined that the Project provides safe, effective, and timely passage for bull trout based upon the findings described above. The monitoring program described in the BTMP is incorporated into our fishway prescription to ensure the Licensee maintains compliance with these performance standard metrics for bull trout through the term of the new license.

To address the Project's effects on Pacific lamprey, including passage, the Licensee proposes to implement the Wells PLMP (Douglas PUD 2010). To provide upstream passage for adult lamprey, the Licensee would continue to operate the Project's upstream fish passage facilities in accordance with the terms of the Wells AFA/HCP. In addition, the Licensee would: (1) continue to conduct annual adult fish passage monitoring in the Wells Dam fishways using the most

current technology available, to count and provide information on upstream migrating adult Pacific lamprey 24 hours per day during the adult fishway monitoring season (May 1-November 15); (2) identify, design, and implement any reasonable upstream passage modifications (structural and/or operational) to improve passage performance for Pacific lamprey without negatively impacting the passage performance of adult anadromous salmonids; and (3) implement a 1-year study to verify the effectiveness of the adult fish ladders with respect to adult lamprey passage every 10 years, or on an as-needed basis, for the term of the new license. If upstream passage problems are identified, then the Licensee would collaborate with the Service, NOAA Fisheries, the Aquatic SWG, the Wells HCP Coordinating Committee, and the BIA to identify and implement reasonable and feasible measures to modify the upstream passage facilities or operations to reduce the identified impacts to adult Pacific lamprey passage. These measures are incorporated into the Department's modified fishway prescriptions for Pacific lamprey.

No new specific facilities, structures, or devices are prescribed to provide for the downstream passage of juvenile lamprey at this time. This is, in part, because the methods to evaluate juvenile lamprey passage and survival are still under development, and the form and function of an effective downstream fishway for juvenile lamprey are unknown. To address this deficiency, the Licensee will develop a downstream juvenile lamprey passage study. The study shall determine whether any negative impacts exist at Wells Dam, and if impacts are present, attempt to quantify them. Upon the approval of the Service, the Licensee shall implement the study. The Licensee will also continue to operate the juvenile bypass system (JBS) for the downstream passage of juvenile lamprey and conduct salvage activities consistent with the Wells AFA/HCP; investigate and, if available, implement regionally-accepted and appropriate technologies shown to be effective at other dams; participate in Pacific lamprey work groups in order to support regional conservation efforts; and implement measures to determine juvenile lamprey presence/absence and relative abundance in areas that may be affected by ongoing or future project operations. These measures are incorporated into the Department's fishway prescriptions for Pacific lamprey.

To assure the effectiveness of the fishway measures prescribed for Pacific lamprey and described in the PLMP, the Licensee must demonstrate that the Project provides safe, timely, and effective passage for all life history stages of Pacific lamprey, namely adult lamprey. The PLMP and this prescription explains that the safe, timely, and effective standard will be achieved when the applicant has demonstrated that adult Pacific lamprey passage is at levels at least as high as those demonstrated at other mid-Columbia River PUD hydroelectric projects.

Section 7. Response to Comments

We have reviewed all comments filed with the Commission during the DEIS comment period that pertain to our Preliminary Prescriptions for Fishways. Detailed DEIS comments were filed by the Licensee, WDFW, Ecology, the Colville Tribes, and the Department. NOAA Fisheries provided notice to the Commission on June 8, 2011 that it had no comment on the DEIS. These commenters encouraged the Commission to support the Wells Aquatic SA in its entirety without material modification. The Commission, through its DEIS, was the only entity that provided a direct analysis of our preliminary fishway prescriptions. The DEIS did not include a significant

portion of our preliminary prescriptions for bull trout and Pacific lamprey in the Staff Alternative, and was particularly dismissive of conditions prescribed for lamprey passage. The rationale for modifying or deleting significant portions of our preliminary prescriptions was based primarily on the assumption that there was no link between the Project and impacts to the upstream and downstream passage of bull trout and Pacific lamprey. In addition, the DEIS asserted that certain prescriptive measures were not supported by information or evidence in the record before the Commission. As discussed in the Department's May 31, 2011, comments on the DEIS, we disagreed with the Commission's analysis of the need for fishways for bull trout and Pacific lamprey.

Section 8. Reservation of Authority to Prescribe Fishways

The Department has prepared its Prescriptions for Fishways in response to the proposals being considered by the Commission in this proceeding involving the proposed re-licensing of the Wells Hydroelectric Project (FERC No. 2149). If any proposal is modified as a result of licensing or after licensing, the Department, through the U.S. Fish and Wildlife Service, will require adequate opportunity to reconsider each prescription and make modifications it deems appropriate and necessary for submittal to the Commission. Therefore, the Department requests that the Commission include the following condition in any license it may issue for this project:

Authority is reserved for the Department to prescribe the evaluation, construction, operation, and maintenance of fishways at the Wells Hydroelectric Project, Project No. 2149, as appropriate, including measures to determine, ensure, or improve the effectiveness of such fishways, pursuant to Section 18 of the Federal Power Act, as amended. This reservation includes, but is not limited to, authority to prescribe fishways for spring, summer, and fall Chinook salmon, sockeye salmon, coho salmon, steelhead, bull trout, Pacific lamprey, white sturgeon, and any other fish to be managed, enhanced, protected, or restored to the mid-Columbia River during the term of the license. Pursuant to Section 9.5.2 of the Wells Anadromous Fish Agreement and Habitat Conservation Plan (Wells AFA/HCP), such reserved fish passage authority may be exercised for Plan Species (spring, summer and fall Chinook salmon, sockeye salmon, coho salmon, and steelhead) only in the event that the Wells AFA/HCP is terminated.

Section 9. Prescription for Fishways

Pursuant to Section 18 of the FPA (16 U.S.C. 81 1), the Secretary of the Interior hereby prescribes the construction, operation, and maintenance of fishways at the Wells Hydroelectric Project, Project No. 2149-152, as set forth in Attachment 1.

The Department's Prescriptions for Fishways, as finalized by this filing, are intended to implement the Wells Aquatic SA without material modification. They rely, in part, on the information in the Wells Aquatic SA and its attachments as substantial evidence in support of our modified fishway prescriptions. If the Aquatic SA noticed by the Commission on May 27, 2010, is not accepted in its entirety or is materially modified by the Commission or a court order, then the Department reserves the right to modify these Prescriptions for Fishways.

If you have any questions regarding the attached documents, please contact Ms. Jessica Gonzales, Assistant Project Leader, U.S. Fish and Wildlife Service, Central Washington Field Office, 215 Melody Lane, Suite 119, Wenatchee, WA 98801 at (509) 665-3508. If you have any other questions, please contact me at (503) 326-2489.

Sincerely,

A handwritten signature in black ink that reads "Allison O'Brien". The signature is written in a cursive, flowing style.

Allison O'Brien
Acting Regional Environmental Officer

Attachments

Certificate of Service
Modified Prescriptions for Fishways

cc: Service List (sent electronically unless hard copy specifically requested)

Literature Cited

The literature cited in our preliminary terms and conditions and prescriptions is hereby incorporated by reference. Other supporting documentation for our modified prescriptions is contained in the administrative record before the Commission.

BioAnalysts, Inc. 2004. Movement of Bull Trout within the mid-Columbia River and tributaries, 2001-2004. Prepared by BioAnalysts, Inc., Eagle Rock, Idaho for Public Utility District No. 1 of Chelan County, Wenatchee, Washington, Public Utility District No. 1 of Douglas County, East Wenatchee, Washington, and Public Utility District No. 2 of Grant County, Ephrata, Washington.

Daigle, W. R., C. A. Peery, S. R. Lee, and M. L. Moser. 2006. Evaluation of Adult Pacific Lamprey Passage and Behavior in an Experimental Fishway at Bonneville Dam. Report to the U.S. Army Corps of Engineers, Portland District, Portland, Oregon.

Douglas PUD (Public Utility District No. 1 of Douglas County). 2002. Wells Hydroelectric Project Anadromous Fish Agreement and Habitat Conservation Plan. Public Utility District No. 1 of Douglas County, East Wenatchee, Washington.

Douglas PUD (Public Utility District No. 1 of Douglas County). 2010. Final License Application. Public Utility District No. 1 of Douglas County. May 27, 2010.

Johnson, P.N, Le, B., and Murauskas, J.G. 2010. Assessment of Adult Pacific Lamprey Response to Velocity Reductions at Wells Dams Fishway Entrances. Wells Hydroelectric Project, FERC No. 2149. June 2010.

LGL (LGL Limited) and Douglas PUD (Public Utility District No. 1 of Douglas County). 2008a. Bull Trout Monitoring and Management Plan 2005- 2008 Final Report for Wells Hydroelectric Project (FERC License No. 2149). Report prepared by LGL Environmental Research Associates and Public Utility District No. 1 of Douglas County for Public Utility District No. 1 of Douglas County, East Wenatchee.

LGL (LGL Limited) and Douglas PUD (Public Utility District No. 1 of Douglas County). 2008b. Adult Pacific Lamprey Passage Evaluation. Wells Hydroelectric Project. No. 2149. Prepared by LGL Limited, Ellensburg, WA. Prepared for Public Utility District No.1 of Douglas County, East Wenatchee, WA.

Mesa, M.G., J.M. Bayer and J.G. Seelye. 2003. Swimming performance and physiological responses to exhaustive exercise in radio-tagged and untagged Pacific lampreys. Transactions of the American Fisheries Society 132: 483 - 492.

Robichaud, D., B. Nass, and Douglas PUD. 2009. Adult Pacific lamprey passage and behavior study (adult lamprey passage study). Wells Hydroelectric Project, FERC No. 2149. Prepared for Public Utility District No. 1 of Douglas County. East Wenatchee, Washington.

Attachment 1

UNITED STATES DEPARTMENT OF THE INTERIOR PRESCRIPTIONS FOR FISHWAYS PURSUANT TO SECTION 18 OF THE FEDERAL POWER ACT FOR THE WELLS HYDROELECTRIC PROJECT PROJECT NO. 2149-000

(For convenience and clarity, these prescriptions are numbered to match the numbers and sections contained or otherwise referenced in the proposed license articles and management plans accompanying the Wells Aquatic Settlement Agreement (Aquatic SA) for the Wells Hydroelectric Project, Project No. 2149-000 (the Project), filed with the Commission on May 27, 2010.)

1.0 Reservation of Authority to Prescribe Fishways

Authority is reserved for the Department of the Interior (Department) to prescribe the evaluation, construction, operation, and maintenance of fishways at the Wells Hydroelectric Project, Project No. 2149, as appropriate, including measures to determine, ensure, or improve the effectiveness of such fishways, pursuant to Section 18 of the Federal Power Act, as amended. This reservation includes, but is not limited to, authority to prescribe fishways for spring, summer, and fall Chinook salmon, sockeye salmon, coho salmon, steelhead, bull trout, Pacific lamprey, white sturgeon, and any other fish to be managed, enhanced, protected, or restored to the mid-Columbia River during the term of the license. Pursuant to Section 9.5.2 of the Wells Anadromous Fish Agreement and Habitat Conservation Plan (Wells AFA/HCP), such reserved fish passage authority may be exercised for Plan Species (spring, summer and fall Chinook salmon, sockeye salmon, coho salmon, and steelhead) only in the event that the Wells AFA/HCP is terminated.

2.0 General Prescriptions for Fishways

The following general prescriptions for fishways apply to the operation and maintenance of both upstream and downstream fishways at the Wells Hydroelectric Project, subject to the provisions of Section 9.5.2 of the Wells AFA/HCP and in accordance with the Wells Hydroelectric Project Aquatic Settlement Agreement (Aquatic SA), including the Bull Trout Management Plan (BTMP), Pacific Lamprey Management Plan (PLMP), and the White Sturgeon Management Plan (WSMP), and are prescribed to ensure the effectiveness of the fishways pursuant to Section 1701(b) of the National Energy Policy Act (P.L. 102-486, Title XVII, 106 Stat. 3008):

- 2.1 The Department reserves the authority to modify, replace or amend these prescriptions for fishways at any time before license issuance, as well as any time

during the term of the license, after review of new substantial evidence in support of a change to the fishway prescription.

- 2.2 The U.S. Fish and Wildlife Service (FWS), pursuant to the authorities of the Department, retains the right to review and approve all documents (e.g., plans, specifications, measures, study designs, reports) developed pursuant to this Prescription prior to construction and implementation of any required measure. These approvals will be provided by the Regional Director, FWS, Portland, OR. To facilitate this review and approval process, correspondence between the Director and the Licensee will occur through:

Assistant Project Leader
U.S. Fish and Wildlife Service
Central Washington Field Office
215 Melody Lane, Suite 119
Wenatchee, WA 98801

- 2.3 The Licensee shall manage the Wells Hydroelectric Project and all its associated features, including the dam, spillways, powerhouse, and reservoir, to provide effective upstream and downstream fish passage over the full range of river flows for which the project maintains operational control. The Licensee shall manage the Project's upstream and downstream fish passage facilities subject to the provisions in this Prescription and in accordance with the Licensee's AFA/HCP Adult Fish Passage Plan and Bypass Operations Plan, and with the Wells Hydroelectric Project Aquatic SA, including the BTMP, PLMP, and the WSMP.
- 3.0 Upstream and Downstream Fishways and Salmon and Steelhead (Appendix E-1) (Plan Species): To provide for the safe, timely, and effective upstream and downstream passage of fish at the Wells Project, the Licensee shall provide for the construction, operation, maintenance, and effectiveness monitoring of upstream and downstream fishways for Plan Species as set forth in the Wells AFA/HCP, filed with the FERC on November 24, 2003, and as approved by the Federal Energy Regulatory Commission (FERC) in 2004 at 107 FERC ¶61,280 and ¶61,281.
- 4.0 Upstream and Downstream Passage for Adult and Sub-Adult Bull Trout (Article 2) (BTMP Section 4.1.1): The Licensee shall provide upstream passage for bull trout through the existing upstream fishways and downstream passage for bull trout through the existing downstream bypass system consistent with the AFA/HCP and Aquatic SA. Both upstream fishway facilities (located on the west and east shores) shall be operational year round with maintenance occurring on each fishway at different times during the winter to ensure that one upstream fishway is always operational. Operation of the downstream passage facilities for bull trout shall be consistent with bypass operations for Plan Species identified in the Wells AFA/HCP.
- 4.1 Bull Trout Passage Performance Standard: The Licensee shall implement the upstream and downstream measures contained in the Wells Hydroelectric Project BTMP to provide safe, timely, and effective upstream and downstream passage

for adult and sub-adult bull trout at the Wells Hydroelectric Project. “Safe, timely and effective” passage shall be achieved when the Licensee has demonstrated that the survival and passage success rates for adult marked fish are greater than 95% and greater than or equal to 90%, respectively, and when passage studies demonstrate that the fishway facilities at Wells Dam do not impede the passage of bull trout. To ensure that safe, timely and effective passage at Wells Dam is maintained during the term of the new license, the Licensee shall implement the following bull trout upstream and downstream measures consistent with the BTMP.

- 4.2 Upstream Fishway Counts (BTMP Section 4.1.2): The Licensee shall continue to conduct video monitoring in the Wells Dam fishways from May 1 through November 15 to count and provide information on the population size of upstream moving bull trout.
- 4.3 Sub-Adult Bull Trout Monitoring (BTMP Section 4.2.3): If at any time during the new license term, sub-adult bull trout are observed passing Wells Dam in significant numbers (>10 per calendar year), the Licensee shall, in consultation with the FWS, and the Wells Aquatic Settlement Agreement Work Group (Aquatic SWG), implement reasonable and appropriate methods for monitoring sub-adult bull trout. Specifically, the Licensee may modify counting activities, and shall continue to provide PIT tags and equipment, and facilitate training to enable fish sampling entities to PIT tag sub-adult bull trout when these fish are collected incidentally during certain fish sampling operations. This activity shall occur the following year of first observation of sub-adult bull trout (>10 per calendar year), in consultation with the FWS and the Aquatic SWG.
- 4.4 Upstream Fishway Operations Criteria (BTMP Section 4.1.3): The Licensee shall continue to operate the upstream fishway at Wells Dam in accordance with criteria outlined in the Wells AFA/HCP and this Prescription.
- 4.5 Bypass Operations Criteria (BTMP Section 4.1.4): The Licensee shall continue to operate the bypass system at Wells Dam in accordance with criteria outlined in the Wells AFA/HCP and this Prescription.
- 4.6 Bull Trout Upstream and Downstream Passage Evaluation (BTMP Section 4.2.1): The Licensee shall periodically monitor upstream and downstream passage of bull trout through Wells Dam and in the Wells Reservoir through the implementation of a radio-telemetry study. Specifically, in years 5 and 10 of the new license, and continuing every 10 years thereafter during the new license term, the Licensee shall conduct a 1-year monitoring study to verify continued compliance with the bull trout passage performance standard (Section 4.1 of this Prescription). These monitoring studies shall employ the same study protocols and radio-telemetry assessment methodologies used at Wells Dam in 2006 and 2007. If the monitoring results demonstrate continued compliance with the bull trout passage performance standard (Section 4.1 of this Prescription), then no additional actions

are needed. If the monitoring results demonstrate that the Licensee is no longer in compliance with the bull trout passage performance standard (Section 4.1 of this Prescription), then the monitoring study will be replicated to confirm the results. If the results after 2 years of monitoring demonstrate that the Licensee is no longer in compliance with the bull trout passage performance standard (Section 4.1 of this Prescription), then the Licensee shall, pursuant to Section 4.8 of this Prescription, develop and implement additional measures to improve bull trout passage until compliance with the bull trout passage performance standard (Section 4.1 of this Prescription) is achieved. If the bull trout counts at Wells Dam increase more than two times the existing 5-year average or if there is a significant change in the operation of the fish ladders, bypass, or hydrocombine, then the Licensee shall, in consultation with the FWS, the Aquatic SWG, and the Wells HCP Coordinating Committee (WCC), shall conduct a 1-year, follow-up monitoring study to verify continued compliance with the bull trout performance standard (Section 4.1 of this Prescription).

- 4.7 Adult Bull Trout Passage Evaluation at Brood Stock Collection Facilities (BTMP Section 4.2.2): The Licensee shall, beginning in year 1 of the new license, conduct a 1-year radio-telemetry evaluation to assess upstream and downstream passage of adult bull trout at the adult salmon and steelhead brood stock collection facilities associated with the Wells AFA/HCP, including but not limited to, the Twisp weir adult collection facility. The Licensee shall capture and tag up to 10 adult, migratory bull trout (>400mm) per assessment per year and use fixed receiver stations upstream and downstream of the collection facilities. Assessments shall employ the same study protocols and radio-telemetry assessment methodologies used at Wells Dam in 2006 and 2007. If the evaluation demonstrates that the Licensee is not in compliance with the bull trout passage performance standard (Section 4.1 of this Prescription), then the evaluation will be replicated to confirm the results. If the results after 2 years of evaluation demonstrate that the Licensee is not in compliance with the bull trout passage performance standard (Section 4.1 of this Prescription), then the Licensee shall develop, implement, and evaluate additional measures, in consultation with the FWS, WCC and the Aquatic SWG, until the FWS determines that the bull trout passage performance standard has been achieved. At such time as the FWS determines the bull trout passage performance standard has been achieved, the implementation of this Condition shall be integrated into the 1-year telemetry monitoring program that is to be conducted every 10 years (beginning in year 10 of the new license) at Wells Dam as identified in Section 4.6 above.
- 4.8 Measures to Modify the Upstream Fishway and Downstream Bypass if Adverse Impacts on Bull Trout are Identified (BTMP Section 4.3): If monitoring (Section 4.6 of this Prescription) identifies upstream or downstream passage problems for bull trout, the Licensee shall, in consultation with the FWS, WCC and the Aquatic SWG, identify, design, implement, and evaluate reasonable and feasible measures to modify the upstream fishway, downstream bypass, or operations to reduce the identified impacts to bull trout passage. Study protocols and radio-telemetry

assessment methodologies prescribed above in Sections 4.6 and 4.7 of this Prescription, shall be used to evaluate the effectiveness of any additional measures implemented to reduce the identified impacts to bull trout passage. Upon completion of the evaluation, the FWS and the National Marine Fisheries Service (NMFS), in consultation with the Aquatic SWG, and the WCC, will determine whether the proposed measure should be made permanent, removed, or modified.

- 5.0 Upstream Passage of Pacific Lamprey (Article 3): The Licensee shall implement the upstream passage measures contained in the Wells Hydroelectric Project PLMP to provide upstream passage for Pacific lamprey at the Wells Dam. Specifically, the Licensee shall implement the Pacific lamprey upstream passage measures identified in the PLMP consistent with the following:
- 5.1 Upstream Passage Performance Standard: The Licensee shall, in consultation with the FWS, the Aquatic SWG, and the U.S Bureau of Indian Affairs (BIA), continue to evaluate upstream Pacific lamprey passage until safe, timely and effective passage has been achieved. This “safe, timely and effective” standard will be achieved when the Licensee has demonstrated that lamprey passage is at levels at least as high as other mid-Columbia River PUD hydroelectric projects, as determined by the FWS, in consultation with the Aquatic SWG and the BIA, until specific Pacific lamprey passage performance standards have been adopted by the FWS. At such time, the Licensee shall demonstrate compliance with the new standards.
- 5.1.1 Steady Progress (PLMP Section 4.1.5): The Licensee shall exhibit steady progress, as agreed to by the FWS, in consultation with the Aquatic SWG and the BIA, towards achieving this Upstream Passage Performance Standard (Section 5.1 of this Prescription). Once compliance is achieved, the Licensee shall only be required to implement activities pursuant to Section 5.8, Periodic Monitoring.
- 5.2 Upstream Fishway Operations (PLMP Section 4.1.1): The Licensee shall operate the existing upstream fishways at Wells Dam in accordance with the operation criteria for anadromous salmonids, bull trout, and Pacific lamprey as outlined in the Wells AFA/HCP and the Wells Aquatic SA, as approved and/or amended by the FWS and the NMFS in consultation with the WCC, the Aquatic SWG, and the BIA.
- 5.3 Salvage Activities During Ladder Maintenance Dewatering (PLMP Section 4.1.2): The Licensee shall continue to implement the Adult Fish Passage Plan and associated Adult Ladder Dewatering Plan as required by the Wells AFA/HCP. All Pacific lamprey that are encountered during dewatering operations shall be salvaged consistent with the protocol identified in the Wells AFA/HCP. Any adult lamprey that are captured during salvage activities shall be released upstream of Wells Dam, unless otherwise determined by the FWS, in consultation

with the Aquatic SWG, and the BIA. The Licensee shall ensure the FWS, Aquatic SWG, and the BIA are made aware of salvage activities, and the Licensee shall also provide a summary of salvage activities in the Wells Aquatic SA annual report.

- 5.4 Upstream Fishway Counts for Pacific Lamprey (PLMP Section 4.1.3): The Licensee shall continue to conduct annual fish passage monitoring in the Wells Dam adult fishways using the best technology commercially available, to count and provide information on upstream migrating adult Pacific lamprey 24-hours per day during the adult fishway monitoring season (May 1 – November 15).
- 5.5 Lamprey Counts (PLMP Section 4.1.3): Based upon information collected from the evaluations of fishway measures prescribed in Section 5.6 below, the Licensee shall, in consultation with the FWS, the Aquatic SWG, and the BIA, develop techniques for enumerating lamprey through all upstream passage routes at Wells Dam. Potential measures to improve counting accuracy may include the development of a correction factor based upon data collected during passage evaluations (PLMP Sections 4.1.6 and 4.1.7) or utilization of an alternative passage route as a counting facility for adult Pacific lamprey.
- 5.6 Fishway Measures to Improve Upstream Passage for Adult Pacific Lamprey (PLMP Section 4.1.1, Section 4.1.4, and Section 4.1.5): The Licensee shall, in consultation with the FWS, WCC, the Aquatic SWG, and the BIA, implement and evaluate the measures contained in Sections 4.1.1, 4.1.4, and 4.1.5 of the PLMP to achieve safe, timely and effective passage of Pacific lamprey. Measures to improve upstream passage for adult Pacific lamprey shall include the following components:
 - 5.6.1 Upstream Passage Improvement Literature Review (PLMP Section 4.1.4 and 4.1.5): The Licensee shall, in consultation with the FWS, the Aquatic SWG, and the BIA, complete a literature review on the effectiveness of upstream passage measures (i.e., lamprey passage systems, plating over diffuser grating, modifications to orifices, rounding sharp edges, adult fishway operational changes, etc.) implemented at other Columbia and Snake river hydroelectric facilities. The literature review will be conducted to help in the selection of reasonable measures that may be implemented to improve adult lamprey passage at Wells Dam.
 - 5.6.2 Implementation of Adult Fishway Measures (PLMP Section 4.1.5): The Licensee shall, in consultation with the FWS, the WCC, the Aquatic SWG and the BIA, identify, design, implement, and evaluate operational and/or structural measures as needed to achieve and maintain safe, timely and effective passage for Pacific lamprey during the new license term. Passage measures will be designed to improve passage performance for Pacific lamprey through the Wells Dam adult fishways without negatively impacting the passage performance of adult anadromous salmonids. Each

measure implemented shall be evaluated by the Licensee to determine its effect on adult Pacific lamprey. All evaluations shall be designed in consultation with the FWS, the Aquatic SWG, and the BIA. Upon completion of any specific evaluation, the FWS and the NMFS, in consultation with the WCC, the Aquatic SWG and the BIA, will determine whether the proposed measure should be made permanent, removed, or modified. The specific components of these operational and structural passage measures and their schedules for implementation shall include the following:

- Adult Fishway Inspection (PLMP Section 4.1.5): Within 1 year of license issuance or as soon as practicable following consultation with the FWS, the Aquatic SWG, and the BIA, the Licensee shall conduct an adult fishway inspection with the FWS, the Aquatic SWG, the BIA, and regional lamprey passage experts to identify, prioritize, and implement measures to improve adult lamprey passage and enumeration at Wells Dam. Additional inspections will be conducted by the Licensee at the request of the FWS, the Aquatic SWG, and the BIA consistent with winter dewatering operations.
- Operations Study Plan (PLMP Section 4.1.1): Within 1 year of license issuance or as soon as practicable following consultation with the FWS, the WCC, the Aquatic SWG and the BIA, the Licensee shall develop an Operations Study Plan (OS Plan) that specifically identifies operational measures to be evaluated, the proposed monitoring strategy, implementation timeline and criteria for success. The plan shall include a component to evaluate the effects of lamprey measures on salmon.
- Entrance Efficiency (PLMP Section 4.1.5): Within 1 year of license issuance or as soon as practicable following consultation with the FWS, the Aquatic SWG, and the BIA, the Licensee shall develop a Lamprey Entrance Efficiency Plan (LEE Plan) for evaluating operational and physical ladder entrance measures intended to increase lamprey passage into the adult fishway without significantly impacting the passage of adult salmonids.
- Diffuser Gratings (PLMP Section 4.1.5): Within 5 years of license issuance or as soon as practicable following consultation with the FWS, the Aquatic SWG, and the BIA, the Licensee shall demonstrate that diffuser gratings within the adult fishways at Wells Dam do not adversely affect passage of adult Pacific lamprey. If diffuser gratings do adversely affect passage, as determined by the FWS, in consultation with the Aquatic SWG and the BIA, the Licensee shall develop a plan and schedule acceptable to the FWS for modifying the gratings as needed to address impacts.

- Transition Zones (PLMP Section 4.1.5): Within 5 years of license issuance or as soon as practicable following consultation with the FWS, the Aquatic SWG, and the BIA, the Licensee shall demonstrate that transition zones within the adult fishways at Wells Dam do not adversely affect passage of adult Pacific lamprey. If transition zones do adversely affect passage, as determined by the FWS, in consultation with the Aquatic SWG and the BIA, the Licensee shall develop a plan and schedule acceptable to the FWS for addressing the impacts.
- Ladder Traps and Exit Pools (PLMP Section 4.1.5): Within 5 years of license issuance or as soon as practicable following consultation with the FWS, the Aquatic SWG, and the BIA, the Licensee shall demonstrate that lamprey ladder traps and exit pools within the adult fishways at Wells Dam do not adversely affect passage of adult Pacific lamprey. If ladder traps and/or exit pools do adversely affect passage, the Licensee shall, in consultation with FWS, the Aquatic SWG, and the BIA, develop a plan and schedule acceptable to the FWS for addressing the impacts.

5.7 Adult Pacific Lamprey Upstream Passage Evaluation (PLMP Section 4.1.6): Within 5 years of license issuance or within 1 year of implementing all measures identified in Section 5.6 (whichever comes first), the Licensee shall, in consultation with the FWS, the Aquatic SWG, and the BIA, conduct a 1-year study to verify the effectiveness of such measures on upstream passage performance of adult Pacific lamprey through Wells Dam. If results demonstrate that passage rates at Wells Dam are below the Upstream Passage Performance Standard (Section 5.1 of this Prescription), the Licensee, shall, in consultation with the FWS, the WCC, the Aquatic SWG, and the BIA, design, evaluate and implement additional measures to improve upstream Pacific lamprey passage. The Licensee shall continue to design, evaluate and implement measures, in consultation with the FWS, the Aquatic SWG, and the BIA, until the Upstream Passage Performance Standard (Section 5.1 of this Prescription) is achieved.

5.8 Periodic Monitoring (PLMP Section 4.1.7): Once adult Pacific lamprey standards have been achieved, the Licensee shall, in consultation with the FWS, the Aquatic SWG, and the BIA, periodically monitor adult Pacific lamprey passage performance through Wells Dam adult fishways to verify continued compliance with the Upstream Passage Performance Standard (Section 5.1 of this Prescription). Specifically, every 10 years after compliance has been achieved, or as determined necessary by the FWS in consultation with the Aquatic SWG, and the BIA, the Licensee shall implement a 1-year study to demonstrate continued compliance with the Upstream Passage Performance Standard (Section 5.1 of this Prescription). If study results demonstrate continued compliance with the Upstream Passage Performance Standard (Section 5.1 of this Prescription) then no additional actions are needed. If the results demonstrate that the Licensee is no longer in compliance with the Upstream Passage Performance Standard (Section 5.1 of this Prescription), then the upstream passage study will be replicated to

confirm the results. If the results after 2 years of study demonstrate that the Licensee is no longer in compliance with the Upstream Passage Performance Standard (Section 5.1 of this Prescription), the Licensee shall, in consultation with the FWS, the Aquatic SWG, and the BIA, develop and implement additional measures to improve upstream Pacific lamprey passage consistent with Sections 5.6 and 5.7 of this Prescription.

- 6.0 Downstream Passage of Juvenile Pacific Lamprey (Article 3) (PLMP Section 4.2.4): At such time as the FWS, in consultation with the Aquatic SWG, and the BIA, determines that substantial evidence exists either at Wells Dam or at a dam with similar features or conditions (e.g., turbines, spillways, and bypass) to Wells, indicating that downstream migrating juvenile lamprey may be negatively impacted at Wells Dam, then the Licensee shall, in consultation with the FWS, the Aquatic SWG, and the BIA, develop a downstream juvenile lamprey passage study. The study shall determine whether a negative impact exists at Wells Dam, and if present, quantify the impact. Upon approval of the FWS, the Licensee shall implement the study. If statistically valid study results indicate that Wells Dam has a substantive negative impact on downstream migrating juvenile lamprey, then the Licensee, in consultation with FWS, the WCC the Aquatic SWG, and the BIA, shall identify and implement regionally accepted measures (e.g., operational or structural changes, translocation, artificial production, habitat enhancement) to address such impacts. If operational or structural changes are needed to improve passage survival of juvenile lamprey, then those changes shall be coordinated with the WCC prior to development and implementation.

