

141 FERC ¶ 62,104  
UNITED STATES OF AMERICA  
FEDERAL ENERGY REGULATORY COMMISSION

Public Utility District No. 1 of  
Douglas County, Washington

Project No. 2149-152

ORDER ISSUING NEW LICENSE

(November 9, 2012)

**INTRODUCTION**

1. On May 27, 2010, Public Utility District No. 1 of Douglas County, Washington (Douglas PUD) filed, pursuant to sections 4(e) and 15 of the Federal Power Act (FPA),<sup>1</sup> an application for a new license to continue operation and maintenance of the existing Wells Hydroelectric Project No. 2149 (Wells Project or project). The project's authorized capacity being licensed is 774.25 megawatts (MW). The project is located on the Columbia River at river mile (RM) 515.6 near the cities of Pateros and Brewster in Douglas, Okanogan, and Chelan counties, Washington. The project occupies 8.60 acres of land administered by the U.S. Department of the Interior (Interior) and 6.55 acres of land administered by the U.S. Army Corps of Engineers (Corps).<sup>2 3</sup>
2. As discussed below, I am issuing a new license for the project.

**BACKGROUND**

3. The Federal Power Commission (Commission) issued the original license for the Wells Project on July 12, 1962, and the license expired on May 31, 2012.<sup>4</sup> Since then, Douglas PUD has operated the project under an annual license pending the disposition of its new license application.

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<sup>1</sup> 16 U.S.C. §§ 797(e) and 808 (2006).

<sup>2</sup> The project is required to be licensed under section 23(b)(1) of the FPA, 16 U.S.C. § 817 (2006) because it occupies federal lands.

<sup>3</sup> In January 2010, Douglas PUD acquired the majority of Interior and Corps lands with the exception of 15.15 acres, within the project boundary and along the transmission line right-of-way, as authorized by the Omnibus Federal Land Act of 2009.

<sup>4</sup> Public Utility District No. 1 of Douglas County, Washington, 28 FPC 128 (1962).

4. On August 10, 2010, the Commission issued a public notice that was published in the *Federal Register* accepting the application for filing, soliciting motions to intervene and protests, indicating the application was ready for environmental analysis, and soliciting comments, final recommendations, terms and conditions, and prescriptions.<sup>5</sup> The notice set October 12, 2010, as the deadline for filing protests and motions to intervene, comments, final recommendations, terms and conditions, and prescriptions.

5. The U.S. Fish and Wildlife Service (FWS), U.S Department of the Interior (Interior), Washington State Department of Ecology (Washington DOE), and National Marine Fisheries Service (NMFS) filed notices of intervention.<sup>6</sup>

6. The Corps, Public Utility District No. 1 of Chelan County (Chelan PUD), Washington Department of Fish and Wildlife (Washington DFW), and the Confederated Tribes of the Umatilla Indian Reservation (Umatilla Tribes) filed timely motions to intervene.<sup>7</sup> None of the intervenors oppose the project. On October 18, 2010, Pat Kelleher filed late comments and a motion to intervene. On August 27, 2012, the Commission issued a notice granting Mr. Kelleher's late intervention.

7. Comments, recommendations, terms and conditions, and prescription were filed by NMFS, FWS, Interior, Bonneville Power Administration (BPA) and the Corps (jointly), Washington DFW, the Umatilla Tribes, and Washington DOE.

8. On April 6, 2011, Commission staff issued a draft environmental impact statement (EIS) on Douglas PUD's application to relicense the project. The cities of Pateros, Brewster, and Bridgeport, Washington; the U.S. Environmental Protection Agency (EPA); Washington DOE; the Confederated Tribes of the Colville Reservation (Colville Tribes); Washington DFW; Interior; Port of Chelan County; Douglas PUD; and NMFS filed comments on the draft EIS. On October 25, 2011, Commission staff issued a final EIS.

9. The interventions, comments, recommendations, and terms and conditions have been fully considered in determining whether, and under what conditions, to issue this license.

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<sup>5</sup> 75 *Fed. Reg.* 51257 (August 19, 2010).

<sup>6</sup> Under rule 214(a)(2) of the Commission's Rules of Practice and Procedure, these entities became parties to the proceeding upon the timely filing of their notices of intervention. 18 C.F.R. § 385.214(a)(2) (2012).

<sup>7</sup> Timely, unopposed motions to intervene are granted by operation of Rule 214(c)(1) of the Commission's Rules of Practice and Procedure. 18 C.F.R. §385.214 (c) (2012).

## **PROJECT DESCRIPTION AND OPERATION**

### **A. Project Area**

10. The Columbia River is about 1,200 miles long, 460 miles of which are in Canada and 740 miles are in the United States. It drains an area of 259,000 square miles, including a large part of Washington and Oregon, substantially all of Idaho, the western portion of Montana, and smaller areas in Nevada, Wyoming, and Utah. Beginning in the 1930s a series of major dams were constructed on the Columbia and Snake rivers for the purposes of electric power, flood control, and irrigation. Collectively, these hydropower projects, which are under both federal and non-federal ownership, are known as the Columbia river system.

11. Proceeding downstream from the Canadian-U.S. border, the first two dams on the Columbia River are Grand Coulee and Chief Joseph, at river mile (RM) 596.6 and RM 545.1, respectively. Both of these dams are federally owned and operated. The next five dams are all non-federal projects and are under Commission license: the Wells Project No. 2149 (at RM 515.6); the 866-MW Rocky Reach Project No. 2145 (at RM 473.7); the 623-MW Rock Island Project No. 943 (at RM 453.4); and the 1,893-MW Priest Rapids Project No. 2114, which includes two dams (Wanapum dam at RM 415.8 and Priest Rapids dam at RM 397.1). These seven dams are collectively called the mid-Columbia dams.

12. Downstream of the mid-Columbia dams, the Columbia River is joined by the Snake River and turns west toward the Pacific Ocean. On this stretch of the river, there are four federal dams: McNary (at RM 292.0), John Day (at RM 215.6), The Dalles (at RM 191.5), and Bonneville (at RM 146.1), all of which are federal projects. The Methow and Okanogan rivers enter the Columbia River upstream of Wells dam within Wells reservoir.

### **B. Project Facilities**

13. The Wells Project includes a dam, reservoir, tailrace area, switchyard, transmission line, upstream and downstream fish passage facilities, a fish hatchery, and recreational facilities. The dam includes an east abutment, a central hydrocombine section, and a west abutment. The 1,030-foot-long, 160-foot-high east abutment consists of an impervious core to bedrock with a filter zone and gravel shell on each side. The 2,300-foot-long, 40-foot-high west abutment consists of an impervious core to the riverbed materials with a filter zone and gravel and rockfill shell on each side. At elevation 781 feet above mean sea level (msl), the reservoir has a surface area of 9,740 acres, a gross storage capacity of 331,200 acre-feet, and a useable storage of 97,985 acre-feet.

14. The 1,165-foot-long, 160-foot-high hydrocombine structure includes 11 spillway bays, 10 generating units, upstream and downstream fish passage facilities, and a

switchyard. The 10 generating units are identical vertical-axis Kaplan turbines with a total installed capacity of 774.25 MW. Each spillway bay is 46 feet wide, and the spill through each bay is controlled by a 66-foot-high gate that is divided into top and bottom sections.

15. The switchyard, located on top of the hydrocombine section, is connected to two single-circuit, 230-kilovolt (kV) transmission lines that extend about 41 miles to the Douglas switchyard, operated by Douglas PUD, where it interconnects with the electric grid.

16. The project's fish passage facilities include two upstream fish ladders and a downstream juvenile bypass system. One fish ladder is located at each end of the hydrocombine, and each ladder includes a pump system for providing attraction flows to the ladder entrance, a counting station, a fish trap and sorting facility, and Passive Integrated Transponder (PIT) tag<sup>8</sup> detection equipment. The downstream juvenile bypass system consists of fabricated steel barriers that are seasonally<sup>9</sup> inserted into spillway bay numbers 2, 4, 6, 8, and 10. The steel barriers are 72 feet high and block all but a 72-foot-high by 16-foot-wide vertical slot through each spillway entrance; they are designed to collapse when the spillway gates are opened more than 6 feet. The project also includes the Wells Hatchery, located on the downstream side of the west abutment of the Wells dam.

### **C. Project Recreation Facilities**

17. The Wells Project includes 17 recreation facilities along the Wells reservoir and tailrace in the cities of Pateros, Brewster, and Bridgeport, Washington, and along the lower reaches of the Methow and Okanogan rivers. They are: (1) Wells dam overlook; (2) Starr boat launch; (3) Chicken Creek boat launch; (4) Monse Bridge boat launch; (5) Cassimer Bar fishing access; (6) Okanogan River informal boat launch and fishing site 1; (7) Okanogan River informal boat launch and fishing site 2; (8) Pateros winter boat launch; (9) Riverside Drive recreation access; (10) Peninsula Park; (11) Memorial Park; (12) Methow boat launch; (13) Columbia Cove Park; (14) Brewster waterfront trail; (15) Marina Park; (16) Carpenter Island boat launch; and (17) Methow fishing access. In addition to continuing to operate and maintain these facilities, Douglas PUD proposes to construct new visitor interpretive displays and a formal tent camping facility, expand the facilities at Marina Park, and extend the launch ramp at the Chicken Creek boat launch.

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<sup>8</sup> PIT tags are small tags implanted in fish that transmit a unique code when they are energized by passing near a receiver antenna. Because they do not require a battery, they have a long lifespan.

<sup>9</sup> The downstream juvenile bypass system is typically operated from mid-April through late August.

#### **D. Project Boundary**

18. The project boundary generally follows the 781-foot-msl elevation contour line along the Wells reservoir, and encloses the project dam, powerhouse, tailrace area, transmission lines, fish passage facilities, the Wells Hatchery, and several wildlife management areas and recreational facilities. The project boundary includes about 2,664 acres of land, of which 8.60 acres are administered by BLM and 6.55 acres are administered by the Corps. Douglas PUD proposes to include all of the lands associated with its recreation facilities in the project boundary as discussed below in the Administrative Provisions section and Article 207.

#### **E. Non-Project Facilities**

19. Several existing fish and wildlife mitigation facilities are located partly or entirely outside of the current project boundary. Facilities located entirely outside of the project boundary include: the Methow Hatchery,<sup>10</sup> the Twisp weir,<sup>11</sup> and three upland units of the Wells Wildlife Area<sup>12</sup> (West Foster Creek, Central Ferry, and Indian Dan Canyon). The other three units of the Wells Wildlife Area (Bridgeport Bar, Okanogan, and Washburn Island) are partially included within the current Wells Project boundary.

#### **F. Current Project Operation**

20. The project is an integral part of the seven-dam mid-Columbia River hydroelectric system. Each of the seven dams is operated in accordance with the terms of the mid-

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<sup>10</sup> The Methow Hatchery, a non-project fish hatchery owned by Douglas PUD, is located about 50 miles from the project at river mile 51 on the Methow River. The hatchery currently produces up to 550,000 spring Chinook salmon smolts as mitigation for unavoidable losses at Douglas PUD's Wells dam, Chelan PUD's Rocky Reach and Rock Island dams, and Public Utility District No. 1 of Grant County's Priest Rapids and Wanapum dams.

<sup>11</sup> Twisp weir is an adult salmon and steelhead broodstock collection facility that is funded by Douglas PUD and operated by Washington DFW to provide broodstock for Douglas PUD's fish hatcheries. Twisp weir is located over 40 miles from the project near river mile 7 on the Twisp River, a tributary to the Methow River.

<sup>12</sup> The Wells Wildlife Area was funded by Douglas PUD and developed by Washington DFW for wildlife protection, mitigation, and enhancement under the original license. Through an off-license agreement, Douglas PUD has agreed to continue to provide funds for these units and Washington DFW will continue to operate and maintain these units during the next license term.

Columbia Hourly Coordination Agreement (HCA),<sup>13</sup> which seeks to coordinate operations for all of the mid-Columbia projects for the best use of flows for generation and to meet fishery and other environmental resource needs.

21. Each day, the participants of the HCA provide the coordinator with an estimated schedule of desired generation from their project(s). Federal operators at the upstream Chief Joseph and Grand Coulee projects provide the coordinator with an estimate of water expected to be discharged from these two dams. The coordinator then, based on information (i.e., anticipated flows, reservoir levels, and load) provided by the HCA participants and upstream federal operators, determines an estimated operation schedule for the following day.

22. The project is also operated according to the provisions of the Pacific Northwest Coordination Agreement (PNCA), which coordinates generation and storage projects in the Columbia River System to achieve the most efficient use of water to meet the electrical loads of the region's utilities. Through the agreement's annual regulation process, the maximum firm power that can be expected from the region's system is calculated. The agreement then provides for the allocation to the parties of water on a monthly basis, optimized as if all the projects in the Columbia River System were operated by a single owner. The agreement's goals are, in order of priority: (1) meeting nonpower requirements such as flood control or environmental measures; (2) ensuring that parties to the agreement can produce their dependable capacities; (3) refilling the reservoirs at the end of the water year; and (4) producing as much non-firm power as possible. Because the Wells Project has limited storage, the project must pass in real-time most of the water it receives from the much larger upstream Grand Coulee dam and can only alter flows on an hourly basis.

23. Along with the HCA and the PNCA, the project also operates under the Hanford Reach Agreement. The Hanford Reach Agreement, filed April 19, 2004, was signed by the Public Utility District No. 1 of Grant County (Grant PUD), Chelan PUD, Douglas PUD, BPA, NMFS, Interior, Washington DFW, and the Colville Tribes, and includes coordination of project operations among the seven mid-Columbia River hydroelectric projects, including the Wells Project.

24. The project is authorized to maintain its reservoir level between elevation 771 and 781 feet msl, but recent operations have maintained levels over 774 feet msl more than

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<sup>13</sup> The HCA was originally signed for a 1-year experimental period from July 1, 1972, to June 30, 1973. The agreement was extended numerous times, and the most recent renewal extends the term of the HCA to November 1, 2017. *See* EIS, section 2.1.3.1.

99 percent of the time. The powerhouse discharge ranges from 13,000 cubic feet per second (cfs) (one unit, minimum load) to 220,000 cfs (full hydraulic capacity).

25. Construction of the Wells Project increased the tailwater elevation at the Chief Joseph Hydroelectric Project, which reduced the hydraulic head available for its generation. Douglas PUD entered into an agreement in 1968 with the Corps to compensate the federal system for power loss due to Wells Project encroachment. The agreement was supplemented in 1982 when the Commission approved raising the elevation of Wells reservoir from elevation 779 feet msl to elevation 781 feet msl.

### **G. Proposed Project Operation and Environmental Measures**

26. Douglas PUD proposes no change to project operation, installed or dependable capacity, or average annual generation.

27. Douglas PUD proposes to continue implementing the Wells Anadromous Fish Agreement and Habitat Conservation Plan (Wells HCP) which was approved by the Commission and incorporated into the existing license on June 21, 2004.<sup>14</sup> The Wells HCP is a programmatic approach developed by Douglas PUD, fisheries agencies, and tribes to reduce and mitigate the effects of the Wells Project on five Columbia River salmon and steelhead trout populations. Since 2007, Douglas PUD has met the goals of the Wells HCP<sup>15</sup> through a combination of juvenile fish hatchery production, predator control in the Wells reservoir, upstream and downstream fish passage facility operations, and habitat restoration projects in tributaries upstream of the project.

28. Douglas PUD also proposes to develop and implement hatchery genetic management plans for the Wells Hatchery and the non-project Methow Hatchery as included in the incidental take statement from NMFS to address the take of ESA-listed salmon and steelhead trout that may occur as a result of artificial production activities at Douglas PUD's fish hatcheries.

29. Douglas PUD proposes to implement a Wildlife and Botanical Management Plan designed to: protect and enhance rare, threatened, and endangered (RTE) wildlife species' habitat and native habitat on Wells Project lands; protect RTE botanical species from land-disturbing activities and herbicide sprays; conserve habitat for species protected by the federal ESA, Bald and Golden Eagle Protection Act, and Migratory Bird Treaty Act; maintain productive wildlife habitat on the Cassimer Bar Wildlife Management Area; and control noxious weeds on project lands.

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<sup>14</sup> 107 FERC ¶ 61,283 (2004).

<sup>15</sup> See final EIS at 28.

30. Douglas PUD also proposes to implement an Avian Protection Plan, which includes a protocol for reporting avian mortalities in the transmission line corridor to the appropriate parties; a nest management protocol to comply with federal and state bird protection laws; a tree removal protocol requiring that any tree removal as part of transmission corridor maintenance only occur between August 31 and January 31 to protect migratory birds; and a training protocol for evaluating avian issues when performing maintenance on the transmission lines and corridor.

31. Douglas PUD proposes to implement an Historic Properties Management Plan (HPMP), that includes provisions for: coordinating and consulting with the Washington State Historic Preservation Officer (Washington SHPO), Tribal Historic Preservation Officer, Commission staff, and other parties as appropriate on the effects of the project on historic properties; education and interpretation; inadvertent discoveries of cultural materials and/or human remains; emergency situations; management standards for the monitoring and treatment of cultural resources; curation and data management; and periodic updates to accommodate environmental and regulatory changes.

32. Douglas PUD also proposes to implement a Recreation Management Plan that includes a Recreation Facility Improvement Program and a Recreation Facility Operation, Maintenance and Monitoring Program.<sup>16</sup> Douglas PUD would also continue to implement its land use policy that includes provisions for ensuring public access to project waters and land while protecting natural resources and complying with the terms of the license as well as other federal and state laws; prohibiting construction activities or other actions that would destroy, deface, or remove vegetation or cultural resources; issuing permits and monitoring compliance of these permits; reporting any project land conveyances to the Commission; issuing permits for docks and fences as appropriate to protect natural and cultural resources; complying with existing agreements; and developing a process by which a policy violation can be resolved.

33. Douglas PUD proposes to implement a number of other aquatic resource protection measures included in the Aquatic Settlement Agreement (Aquatic Agreement) described below.

## **SETTLEMENT AGREEMENT**

34. Douglas PUD filed the Aquatic Agreement with its license application. Signatories to the Aquatic Agreement include: Douglas PUD, FWS, BLM, Washington DFW, Washington DOE, the Colville Tribes, and the Yakama Nation.<sup>17</sup> The Aquatic

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<sup>16</sup> Douglas PUD has also entered into agreements with the cities of Pateros, Brewster, and Bridgeport, which cover operation and maintenance of recreation facilities.

<sup>17</sup> According to section 1.0 of the Aquatic Agreement, NMFS did not sign the agreement because its interests are satisfied by the measures included in the Wells HCP



Agreement was publicly noticed for comments on July 7, 2010<sup>18</sup> and evaluated in the EIS.

35. The Aquatic Agreement includes provisions for establishing an Aquatic Settlement Work Group (Aquatic SWG) to oversee implementation and adaptive management of the specific measures contained in the Aquatic Agreement. The Aquatic Agreement also includes six proposed license articles to implement the six proposed aquatic resource management plans summarized below.

36. Proposed Article 1 requires Douglas PUD to implement the measures set forth in section 4 of the White Sturgeon Management Plan, including: developing a broodstock collection and breeding plan; implementing a juvenile stocking and evaluation program with potential participation in a mid-Columbia hatchery facility jointly funded by Douglas PUD, Chelan PUD, and Grant PUD; implementing a monitoring program to guide the stocking program; tagging and tracking a portion of the stocked sturgeon; determining the natural production potential of the Wells reservoir; compiling information on other white sturgeon supplementation and recovery programs in the Columbia River Basin; evaluating the biological benefits of implementing adult sturgeon passage measures<sup>19</sup> that are consistent with passage measures implemented at other mid-Columbia projects; and identifying and implementing measures to provide local education about white sturgeon; and annual reporting.

37. Proposed Article 2 requires Douglas PUD to implement the measures set forth in section 4 of the Bull Trout Management Plan, including: continuing to provide upstream and downstream passage for bull trout through existing fish passage facilities; continuing to conduct video monitoring for bull trout in the Wells dam fish ladders; conducting periodic upstream and downstream passage evaluations to document compliance with allowable levels of bull trout incidental take; evaluating upstream and downstream passage and incidental take of bull trout at the project's Wells Hatchery and off-project broodstock collection facilities associated with the Wells HCP; developing a plan to

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(which is a condition of the current license and, as discussed in this order, is also included as a condition of this license).

<sup>18</sup> 75 *Fed. Reg.* 40,821 (July 14, 2010).

<sup>19</sup> The adult sturgeon passage evaluation would be conducted by the Aquatic SWG in year 11 of the new license and every ten years thereafter, and would consist of the following: (1) evaluating information gathered from monitoring and evaluation activities and determining whether there is significant biological benefit and need for upstream passage; (2) the availability of reasonable and appropriate means to provide upstream passage; and (3) consensus from all other operators of the mid-Columbia hydroelectric projects to implement adult upstream passage measures.

address passage effects or exceedances of incidental take; implementing specific measures (e.g., PIT tagging and sampling) if a significant number of juvenile bull trout are observed passing Wells dam;<sup>20</sup> implementing modifications to upstream and downstream fish passage facilities or project operations if passage problems for bull trout are identified; evaluating bull trout stranding during periods of low reservoir elevation and implementing measures to address any associated exceedances of bull trout incidental take; monitoring activities associated with the implementation of other aquatic resource measures from the Aquatic Agreement and developing a plan to address incidental take exceedances of bull trout associated with the measures; collecting tissue samples and funding genetic analysis of sampled bull trout; participating in regional information exchanges for bull trout research and monitoring; developing an interpretive display at the Wells Dam Visitor Center to promote the conservation and recovery of bull trout in the upper Columbia River (UCR) and its tributaries; and annual reporting.

38. Proposed Article 3 requires Douglas PUD to implement the measures set forth in section 4 of the Pacific Lamprey Management Plan, including: continuing to operate the fish ladders and juvenile bypass facilities and conducting fish ladder salvage activities according to the criteria established in the Wells HCP; developing an operations study plan to evaluate potential operational modifications to improve upstream lamprey passage and implementing operational modifications required by the Aquatic SWG; continuing to count adult Pacific lamprey 24-hours-per-day during the adult fish ladder monitoring season (May 1 through November 15) using the most-current technology available; potentially implementing alternative measures to improve lamprey counting; conducting a literature review of upstream passage improvements for adult lamprey implemented at other Columbia and Snake River hydroelectric projects; conducting a fishway inspection and evaluating the need for implementing four specific fishway improvement measures; evaluating the effectiveness of lamprey fishway improvement measures and conducting periodic monitoring over the license term; improving adult lamprey passage until the Aquatic SWG agrees that performance is at a level similar to other mid-Columbia hydroelectric projects, or until the project complies with a regional lamprey passage standard that is being developed and adopted by the Aquatic SWG; conducting literature reviews at 5-year intervals to evaluate juvenile lamprey passage at other Columbia and Snake River hydroelectric projects; conducting a juvenile lamprey downstream passage evaluation if appropriate technology is developed during the license term to conduct such a study; implementing measures, studies, or operational modifications in consultation with the HCP Coordinating Committee<sup>21</sup> and the Aquatic SWG if the results of a future,

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<sup>20</sup> A significant number is defined as greater than 10 sub-adult bull trout observed in a calendar year.

<sup>21</sup> The HCP Coordinating Committee is generally composed of one representative of each party to the HCP, as described in more detail in section 6 of the HCP.

potential juvenile-lamprey downstream passage evaluation indicates that Wells Project operations are adversely affecting lamprey populations above Wells dam; implementing a study to examine the presence and relative abundance of juvenile lamprey in habitat affected by the project; participating in Pacific lamprey regional work groups; and annual reporting.

39. Proposed Article 4 requires Douglas PUD to implement the measures set forth in section 4 of the Resident Fish Management Plan, including: continuing to implement the Wells HCP predator control program; conducting resident fish studies throughout the license term to determine the relative abundance of various resident fish species within Wells reservoir and to detect negative changes in resident fish populations; implementing reasonable and appropriate measures to address significant negative populations; conducting an assessment to identify the potential effects of potential changes in project operations on native resident fish, and implementing reasonable and appropriate measures in consultation with the Aquatic SWG to address potential effects; and annual reporting.

40. Proposed Article 5 requires Douglas PUD to implement the measures set forth in section 4 of the Aquatic Nuisance Species Management Plan, including: implementing best management practices (BMP) to contain aquatic nuisance species during implementation of recreation enhancement measures; monitoring for the presence of aquatic nuisance species (zebra and quagga mussels) in project waters; notifying agencies and implementing containment measures if aquatic nuisance species are detected; participating in information exchanges and regional efforts to coordinate aquatic nuisance species monitoring activities; monitoring by-catch data from implementation of other aquatic resource measures for the presence of aquatic nuisance species; implementing public outreach measures for preventing the spread of aquatic nuisance species; assessing the effects of any future changes in project operation on the proliferation of aquatic nuisance species and implementing measures to address adverse effects; and annual reporting.

41. Proposed Article 6 requires Douglas PUD to implement the measures set forth in section 4 of the Water Quality Management Plan, including: monitoring total dissolved gas, water temperature, and other water quality parameters to ensure compliance with state water quality criteria; transmitting total dissolved gas data to a web-accessible database; providing an annual report of all spill and predicted total dissolved gas levels that occur outside of the fish passage season;<sup>22</sup> developing and implementing a Gas

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<sup>22</sup> The total dissolved gas report for the non-fish passage season will document total dissolved gas levels at the project during the time of year of when spill is unlikely to occur and Douglas PUD is not operating the downstream juvenile bypass system (currently October through March).

Abatement Plan annually for approval by Washington DOE; coordinating the annual Wells HCP Fish Bypass/Spill Operations Plan and Gas Abatement Plan to minimize the production of total dissolved gas during periods of spill,<sup>23</sup> and submitting proposed operations to the Aquatic SWG and Wells HCP Coordinating Committee for approval; preparing a total dissolved gas annual report; making water quality data available to EPA to assist in development of the Columbia River temperature total maximum daily load; notifying Washington DOE and the Aquatic SWG of instances of non-compliance with state water quality criteria; implementing future measures to address non-compliance with numeric criteria or as a result of development of the Columbia River temperature total maximum daily load; operating the project to minimize spill of hazardous substances and implementing the Spill Prevention Control and Countermeasures Plan; continuing to participate in the Columbia and Snake River Spill Response Initiative;<sup>24</sup> continuing to participate in regional Water Quality Team and Adaptive Management Team meetings; allowing Washington DOE staff access to the project after reasonable notice to Douglas PUD; coordinating project operations with other mid-Columbia hydroelectric projects; preparing study plans to guide implementation of the water quality monitoring program; and annual reporting.

42. In general, the Commission looks with favor on settlements in licensing cases. When parties are able to reach settlements, it can save time and money, avoid the need for protracted litigation, promote the development of positive relationships among entities who may be working together during the course of a license term, and give the Commission, as it acts on license and exemption applications, a clear sense as to the parties' views on the issues presented in each settled case.<sup>25</sup> However, the Commission cannot automatically accept all settlements, or all provisions of settlements. Section 10(a)(1) of the FPA<sup>26</sup> requires that the Commission determine that any licensed project is

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<sup>23</sup> The Wells HCP Fish Bypass/Spill Operations Plan and Gas Abatement Plan will describe proposed project operations to minimize total dissolved gas production during the time of year when spill typically occurs and Douglas PUD is operating the downstream juvenile bypass system (currently April through August). Documentation of actual total dissolved gas levels that occur during the downstream fish passage season will be provided in the total dissolved gas annual report.

<sup>24</sup> The Columbia and Snake River Spill Response Initiative is a collaborative effort from local, state, and federal entities as well as members of industry to develop and address the immediate need for oil spill preparedness and response along the Columbia and Snake Rivers.

<sup>25</sup> See Settlements in Hydropower Licensing Proceedings under Part I of the Federal Power Act, 116 FERC ¶ 61,270 at p. 2-12 (2006).

<sup>26</sup> 16 U.S.C. § 803 (2006).

“best adapted to a comprehensive plan for improving or developing a waterway or waterways for the use or benefit of interstate or foreign commerce, for the improvement and utilization of waterpower development, for the adequate protection, mitigation, and enhancement of fish and wildlife (including related spawning grounds and habitat), and for other beneficial public uses, including irrigation, flood control, water supply, and recreational and other purposes referred to in section 4(e).”<sup>27</sup>

43. Consequently, in reviewing settlements, the Commission looks not only to the wishes of the settling parties, but also at the greater public interest, and whether settlement proposals meet the comprehensive development/equal consideration standard.

44. In the EIS, staff recommended many of the measures proposed in the Aquatic Agreement, and this license includes most of the specific measures included in the six aquatic resources management plans. However, there are several measures that staff did not recommend, or recommended with modifications. The sections below discuss staff’s recommended modifications to measures proposed in the Aquatic Agreement, and measures staff did not recommend but are included in this license because they are required pursuant to section 18 of the FPA, section 401 of the Clean Water Act (CWA),<sup>28</sup> or to be consistent with FWS’ or NMFS’ biological opinion incidental take statements under section 7 of the ESA.

## **SUMMARY OF LICENSE REQUIREMENTS**

45. As summarized below, this license, which authorizes 774.25 MW of renewable energy, requires a number of measures to protect and enhance water quality, fish, wildlife, cultural, and recreation resources at the project.

46. To protect and enhance Columbia River salmon and steelhead trout populations, this license requires Douglas PUD to continue implementing the Wells HCP which includes juvenile fish hatchery production, predator control, upstream and downstream fish passage, and habitat restoration. Douglas PUD will also develop and implement a hatchery genetic management plan for the Wells Hatchery UCR steelhead program to address the take of ESA-listed salmon and steelhead trout that may occur as a result of artificial production activities at Douglas PUD’s fish hatcheries.

47. To protect and enhance water quality and other fisheries resources not specifically addressed by the Wells HCP, this license requires Douglas PUD to implement the Aquatic Agreement’s White Sturgeon, Bull Trout, Pacific Lamprey, Resident Fish, Aquatic Nuisance Species, and Water Quality Management Plans, described above.

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<sup>27</sup> 16 U.S.C. § 803(a)(1) (2006).

<sup>28</sup> 33 U.S.C. § 1341(a)(1) (2006).

48. To protect and enhance terrestrial resources, this license requires Douglas PUD to implement its Wildlife and Botanical Management Plan, and implement its Avian Protection Plan. To protect and enhance cultural resources, this license requires Douglas PUD to implement its HPMP to ensure that any adverse effects on historic properties as a result of project operation, maintenance, recreational, or other activities are addressed over the term of the new license, and ensure protection of cultural resources within the project boundary. Douglas PUD will also continue to implement the Douglas PUD Land Use Policy to ensure that any land management decisions and activities associated with project lands are in compliance with the HPMP. To protect and enhance recreational resources, this license requires Douglas PUD to implement its Recreation Management Plan.

### **WATER QUALITY CERTIFICATION**

49. Under section 401(a)(1) of the Clean Water Act (CWA),<sup>29</sup> the Commission may not issue a license authorizing the construction or operation of a hydroelectric project unless the state water quality certifying agency either has issued water quality certification for the project or has waived certification by failing to act on a request for certification within a reasonable period of time, not to exceed one year. Section 401(d) of the CWA provides that the certification shall become a condition of any federal license that authorizes construction or operation of the project.<sup>30</sup>

50. On September 30, 2010, Douglas PUD applied to Washington DOE for a water quality certification for the Wells Project, which the Washington DOE received on October 1, 2010. On September 12, 2011, Douglas PUD withdrew and refiled its application. On February 27, 2012, Washington DOE issued a certification for the project that includes conditions, which are set forth in Appendix A of this order and incorporated into the license (see Ordering Paragraph D).

51. The certification includes general administrative conditions that include requirements for complying with state water quality standards and any future changes to applicable state water quality laws. The general conditions also reserve authority for Washington DOE to amend the certification; modify schedules and deadlines provided under the certification; require additional monitoring, studies, and measures; take various actions to enforce the terms of the certification; and condition or deny future proposed changes to the project or project operations that might significantly and adversely affect compliance with any applicable water quality standard.

52. With regard to the six plans in the Aquatic Settlement, the certification requires

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<sup>29</sup> 33 U.S.C. § 1341(a)(1) (2006).

<sup>30</sup> 33 U.S.C. § 1341(d) (2006).

the implementation of the White Sturgeon, Bull Trout, Pacific Lamprey, and Resident Fish Management Plans without modification. The certification requires the implementation of the Aquatic Nuisance Species Management Plan along with four additional requirements,<sup>31</sup> requires several modifications and additions to the Water Quality Management Plan,<sup>32</sup> and requires Douglas PUD to implement and meet the requirements of the Wells HCP.

53. As discussed in the final EIS,<sup>33</sup> staff did not recommend several of the measures

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<sup>31</sup> The additional measures to be implemented as part of the Aquatic Nuisance Species Management Plan include: (1) monitor for aquatic nuisance plants and non-native crayfish (in addition to the plan requirements to monitor for zebra and quagga mussels); (2) provide signage and pamphlets at project boat launches to increase public awareness of aquatic nuisance species; (3) report on any aquatic nuisance species problems; and (4) develop an Aquatic Nuisance Species Control and Prevention Plan to monitor and manage any new aquatic nuisance species detected within the project boundary and affected by the project.

<sup>32</sup> The additional measures to be implemented as part of the Water Quality Management Plan include: (1) achieve compliance with state total dissolved gas (TDG) standards within 10 years of license issuance; (2) monitor and report spills and TDG levels during the entire year, including both the juvenile fish passage and non-fish passage seasons, to document compliance with state TDG standards; (3) provide Washington DOE an annual TDG report by February 28 of each year following license issuance that describes the results of all activities conducted under the Gas Abatement Plan and all spill and associated TDG levels in the tailrace that occur outside of the fish passage season; (4) prepare a Water Quality Attainment Plan for Washington DOE's review and approval that provides a framework for ensuring compliance with state TDG standards within 10 years of license issuance; (5) implement operational measures to minimize spill and provide Washington DOE with the opportunity to review and condition any non-routine operational or structural changes affecting TDG levels; (6) extend the duration of the annual water temperature monitoring program by an additional 46 days from April 1 to October 31 (instead of terminating on September 15); (7) transmit hourly water temperature data to a web-accessible database; (8) provide Washington DOE an annual water temperature monitoring report by April 30 of each year following license issuance; (9) reserve authority to Washington DOE to amend the certification to include measures that may be required after EPA's approval of a Columbia River temperature total maximum daily load; (10) implement additional measures and notification procedures to minimize and control spills of hazardous substances; and (11) implement measures for water quality protection during future construction activities at the project.

<sup>33</sup> See final EIS at 223 through 231.

included in the Aquatic Agreement because, as discussed in other sections of this license, they include provisions for non-specific or future potential measures; measures that are unrelated to project effects or purposes; cost-sharing with a third-party; or measures with benefits that do not justify their cost. However, all of the certification conditions are included in this license because they are mandatory under section 401 of the CWA.

## **COASTAL ZONE MANAGEMENT ACT**

54. Under section 307(c)(3)(A) of the Coastal Zone Management Act (CZMA),<sup>34</sup> the Commission cannot issue a license for a project within or affecting a state's coastal zone unless the state CZMA agency concurs with the license applicant's certification of consistency with the state's CZMA program, or the agency's concurrence is conclusively presumed by its failure to act within 6 months of its receipt of the applicant's certification.

55. By letter filed February 9, 2011, Washington DOE notified Douglas PUD that the project is neither within the Washington coastal zone nor within a geographic area in which Washington DOE would review licenses for consistency with the CZMA. Therefore, no consistency certification is required.

## **SECTION 18 FISHWAY PRESCRIPTIONS**

56. Section 18 of the FPA<sup>35</sup> provides that the Commission shall require the construction, maintenance, and operation by a licensee of such fishways as may be prescribed by the Secretary of the Interior or the Secretary of Commerce (Commerce), as appropriate.

57. On October 6, 2010, Interior filed preliminary fishway prescriptions for salmon, steelhead, bull trout, and Pacific lamprey with its record of decision. On August 1, 2011, Interior filed modified fishway prescriptions. Interior's prescriptions are consistent with, and in most cases identical to, the fish passage measures included in the Aquatic Agreement and Wells HCP.

58. Interior's fishway prescriptions include: (1) managing the project to provide effective upstream and downstream fish passage over the full range of river flows for which the project maintains operational control; (2) providing for the construction, operation, maintenance, and effective monitoring of upstream and downstream fishways as set forth in the Wells HCP; (3) providing upstream and downstream passage for salmon, steelhead, bull trout, and Pacific lamprey through the existing fish ladders and

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<sup>34</sup> 16 U.S.C. § 1456(c)(3)(A) (2006).

<sup>35</sup> 16 U.S.C. § 811 (2006).



downstream bypass system and conducting fish ladder salvage activities as set forth in the Wells HCP and Aquatic Agreement; (4) implementing upstream and downstream passage measures for bull trout to provide safe, timely, and effective passage;<sup>36</sup> (5) continuing to evaluate and improve upstream Pacific lamprey passage until safe, timely, and effective passage is achieved;<sup>37</sup> (6) continuing to count adult Pacific lamprey 24-hours-per-day during the May 1 to November 15 adult fish ladder monitoring season, using the best technology that is commercially available; (7) developing techniques for counting lamprey through all upstream passage routes at Wells dam; (8) conducting a literature review and fishway inspection to identify, prioritize, and implement measures to improve adult lamprey passage and enumeration at Wells dam; (9) developing an Operations Study Plan to evaluate potential operational modifications to improve upstream lamprey passage; (10) evaluating the need to develop plans to implement four specific fish ladder improvements (i.e., entrance efficiency, diffuser gratings, transition zones, and ladder traps/exit pools); (11) evaluating the effectiveness of lamprey fish ladder improvement measures and conducting periodic monitoring over the license term; and (12) implementing a juvenile lamprey downstream passage study if the FWS determines that substantial evidence exists at Wells dam or a dam with similar features or conditions to indicate that downstream migrating juvenile lamprey are negatively affected by Wells dam, and if adverse effects are detected, then implement measures to address adverse effects.

59. While staff agreed with some of these conditions, several of these conditions were not recommended by staff in the EIS, as discussed in other sections of this license. However, all of the conditions are included in this license because they are mandatory under section 18 of the FPA. Interior's prescriptions are attached to this order as Appendix C, and incorporated into this license by Ordering Paragraph F.

60. On October 8, 2010, NMFS (through Commerce) filed a preliminary fishway prescription for salmon and steelhead. On July 21, 2011, NMFS filed a letter stating that its preliminary prescription is final. NMFS' prescription directs Douglas PUD to carry out its obligations, in their entirety, as set forth in the Wells HCP. NMFS' prescription is attached to this order as Appendix B, and incorporated into this license by Ordering Paragraph E.

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<sup>36</sup> The safe, timely, and effective passage standard for bull trout is defined as survival and passage rates for adult marked fish of greater than 95 percent and greater than or equal to 90 percent, respectively, and when passage studies demonstrate that the project does not impede bull trout passage.

<sup>37</sup> The safe, timely, and effective passage standard for Pacific lamprey is defined as passage levels at least as high as other mid-Columbia River hydroelectric projects, until specific Pacific lamprey passage performance standards are adopted by the FWS.

61. With their prescriptions, both Interior and NMFS requested that the Commission reserve authority to modify their fishway prescriptions. Consistent with Commission policy, Article 407 of this license reserves the Commission's authority to require fishways that may be prescribed by Interior or Commerce for the Wells Project.

### **ESSENTIAL FISH HABITAT**

62. Section 305(b)(2) of the Magnuson-Stevens Fishery Conservation and Management Act<sup>38</sup> requires federal agencies to consult with the Secretary of Commerce regarding any action or proposed action authorized, funded, or undertaken by the agency that may adversely affect Essential Fish Habitat (EFH) identified under the Act. Under section 305(b)(4)(A) of the Magnuson Stevens Act, NMFS is required to provide EFH Conservation Recommendations for actions that would adversely affect EFH.<sup>39</sup> Under section 305(b)(4)(B) of the Act, an agency must, within 30 days after receiving recommended conservation measures from NMFS or a Regional Fishery Management Council, describe the measures proposed by the agency for avoiding, mitigating, or offsetting the effects of the agency's activity on the EFH.<sup>40</sup>

63. EFH is designated for various lifestages of Chinook salmon in the mainstem Columbia River and the Okanogan and Methow rivers within the project boundary. In the EIS, Commission staff determined that licensing the project with staff's recommended measures and agency mandatory conditions, would not adversely affect EFH. By letter dated April 12, 2011, Commission staff initiated EFH consultation with NMFS. NMFS included an analysis of the project's effects on Chinook salmon EFH in its March 7, 2012, biological opinion for the project. NMFS concluded that the project would adversely affect EFH, but also concluded that the terms and conditions of the biological opinion incidental take statement would address the adverse effects. Consequently, NMFS recommended that the terms and conditions be adopted as EFH Conservation Recommendations.

64. As discussed below, this license includes all of the terms and conditions contained in NMFS' biological opinion incidental take statement.

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<sup>38</sup> 16 U.S.C. § 1855(b)(2) (2006).

<sup>39</sup> 16 U.S.C. § 1855(b)(4)(A) (2006).

<sup>40</sup> 16 U.S.C. § 1855(b)(4)(B) (2006). The measures recommended by the Secretary of Commerce are advisory, not prescriptive. However, if the federal agency does not agree with the recommendations of the Secretary of Commerce, the agency must explain its reasons for not following the recommendations.

## THREATENED AND ENDANGERED SPECIES

65. Section 7(a)(2) of the Endangered Species Act of 1973<sup>41</sup> requires federal agencies to ensure that their actions are not likely to jeopardize the continued existence of federally listed threatened and endangered species, or result in the destruction or adverse modification of their designated critical habitat.

66. Four federally listed threatened and endangered species occur in the project vicinity: Columbia River bull trout, UCR spring-run Chinook salmon, UCR steelhead, and Ute ladies'-tresses. Critical habitat is designated in the project area within the Columbia and Methow rivers for UCR spring-run Chinook salmon and bull trout, and in the Columbia, Methow, and Okanogan rivers for UCR steelhead. Commission staff determined in the final EIS<sup>42</sup> that none of the proposed action alternatives would affect Ute ladies'-tresses. Therefore, no further action under the Endangered Species Act is required for this species.

### A. NMFS

67. In the draft EIS,<sup>43</sup> Commission staff concluded that continued operation of the project is not likely to adversely affect UCR spring-run Chinook salmon or UCR steelhead, or designated critical habitat for either of these species. In its letter filed May 12, 2011, NMFS stated it could not concur with staff's determination for either species or their critical habitat at that time, and would like additional time to diligently analyze its determination.

68. After further analysis and review of the final EIS issued on October 25, 2011, NMFS filed a biological opinion on March 7, 2012, with its determination that the project is not likely to jeopardize the continued existence of UCR spring-run Chinook salmon or UCR steelhead, or destroy or adversely modify either of these species' designated critical habitat. NMFS also concluded that the project is not likely to adversely affect the southern resident killer whale and would have no effect on its designated critical habitat. NMFS' biological opinion includes an incidental take statement with four reasonable and prudent measures to minimize take of listed UCR spring-run Chinook salmon and UCR steelhead trout along with three terms and conditions to implement the measures.

69. The reasonable and prudent measures include: (1) minimizing incidental take from the operation of the project by requiring the licensee to adhere to all of the measures

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<sup>41</sup> 16 U.S.C § 1536(a) (2006).

<sup>42</sup> See draft EIS at 10.

<sup>43</sup> See draft EIS at 9–10.

in the Wells HCP; (2) minimizing incidental take from the unanticipated release of hazardous substances, toxics, excessive sediments, debris, and other materials into the Columbia River and its tributaries by following the provisions of the Water Quality Management Plan; (3) minimizing incidental take from in-water and near-water construction activities by using BMPs for the proposed action to avoid or minimize adverse effects to water quality and aquatic resources; and (4) including a standard reopener clause in any license issued for the project to ensure continuing agency discretion throughout the life of the license as may be necessary to protect species listed under the ESA.

70. The terms and conditions include: (1) conducting a monitoring and reporting program to report all incidental take; (2) following and implementing all terms and conditions of the Aquatic Agreement's Water Quality Management Plan; and (3) implementing best management practices during construction activities. These reasonable and prudent measures and conditions are included in Appendix D and are made part of this license by Ordering Paragraph G. Article 15 of form L-5, the Commission's standard fish and wildlife reopener clause, addresses condition 4 of NMFS' incidental take statement reasonable and prudent measures.

## **B. FWS**

71. In the draft EIS,<sup>44</sup> Commission staff concluded that continued operation of the project is not likely to adversely affect Columbia River bull trout or its designated critical habitat. In its letter filed on May 9, 2011, FWS stated that it did not concur with staff's determinations and requested a complete analysis of the project's effects on bull trout critical habitat be included in a final biological assessment<sup>45</sup> prior to the initiation of formal consultation. By letter dated July 19, 2011, Commission staff informed FWS that the EIS and the project record includes the best available information on the effects of the project on bull trout and its designated critical habitat, and that staff did not intend to prepare a final biological assessment. In the same letter, staff requested that FWS initiate formal consultation based on the analysis contained in the draft EIS. On August 29, 2011, Douglas PUD filed supplemental information on the effects of the project on bull trout designated critical habitat. On September 14, 2011, staff issued a letter to FWS indicating that it agreed with Douglas PUD's findings included in its supplemental

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<sup>44</sup> See draft EIS at 10.

<sup>45</sup> Commission staff did not prepare a draft biological assessment; however, in staff's April 12, 2011 letter to the FWS requesting concurrence with the findings in the draft EIS, staff noted that Douglas PUD had prepared and filed a draft biological assessment as supplemental information to staff's analysis in the draft EIS and noted its availability in the project record.

information and again requested that FWS initiate formal consultation. On March 19, 2012, FWS filed a biological opinion with its determination that the project is not likely to jeopardize the continued existence of bull trout and is not likely to destroy or adversely modify designated bull trout critical habitat.

72. In its biological opinion, FWS included five reasonable and prudent measures to minimize the effects of anticipated incidental take of bull trout and 13 incidental take terms and conditions to implement the reasonable and prudent measures. The reasonable and prudent measures include: (1) providing adequate year-round passage conditions for all life stages of bull trout at all project facilities; (2) minimizing the effects of spillway operations and hydrographic variations to all life stages of bull trout at all project facilities; (3) minimizing the effects of the hatchery supplementation program to all life stages of bull trout; (4) minimizing the effects of the aquatic resource management plans (white sturgeon, Pacific lamprey, resident fish, aquatic nuisance species, water quality) and the predator control program to all life stages of bull trout; and (5) designing and implementing a bull trout monitoring program to detect and quantify Wells Project impacts, including those associated with the Wells dam, Twisp weir trapping facilities, and hatchery facilities.

73. All 13 terms and conditions are either components of the Aquatic Agreement's Bull Trout Management Plan required by Washington DOE's water quality certification, or FWS' section 18 prescription, and are discussed in other sections of this license. These reasonable and prudent measures and conditions are included in Appendix E and are made part of this license by Ordering Paragraph H.

74. ESA section 7(a)(1)<sup>46</sup> directs federal agencies to use their authorities to further the purposes of the ESA by carrying out conservation programs for the benefit of endangered and threatened species. Conservation recommendations are discretionary agency activities to minimize or avoid adverse effects of a proposed action on listed species or critical habitat, to help implement recovery plans, or to develop information. FWS' biological opinion includes four conservation recommendations for the Wells Project: (1) implementing unspecified recovery actions and restoration opportunities identified in the FWS' draft Bull Trout Recovery Plan<sup>47</sup> where the Wells Project activities involve or intersect recovery actions; (2) coordinating with, and contribute to, bull trout monitoring efforts in the Columbia River Basin; (3) designing and implementing an environmental education plan for bull trout; and (4) participating in information exchanges with other entities conducting bull trout research, and regional efforts to explore availability of new

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<sup>46</sup> 16 U.S.C. § 1536(a)(1).

<sup>47</sup> FWS. 2002. Bull trout (*Salvelinus confluentus*) draft recovery plan. Portland, Oregon.

monitoring methods and coordination of radio tag frequencies for bull trout monitoring studies conducted at the project.

75. Of these four conservation recommendations, the first is non-specific and would be difficult or impossible to enforce, and therefore it is not included as a condition of the license. The other three conservation recommendations are included in the license because they are components of the Aquatic Agreement's Bull Trout Management Plan, which is required in whole or in part by Washington DOE's water quality certification (Appendix A), Interior's section 18 prescriptions (Appendix C), and FWS' incidental take statement terms and conditions (Appendix E) and are discussed in detail in other sections of this license.

### **NATIONAL HISTORIC PRESERVATION ACT**

76. Under section 106 of the National Historic Preservation Act (NHPA)<sup>48</sup> and its implementing regulations,<sup>49</sup> federal agencies must take into account the effect of any proposed undertaking on properties listed or eligible for listing in the National Register of Historic Places (defined as historic properties) and afford the Advisory Council on Historic Preservation a reasonable opportunity to comment on the undertaking. This generally requires the Commission to consult with the SHPO to determine whether and how a proposed action may affect historic properties and seek ways to avoid or minimize any adverse effects.

77. To satisfy these responsibilities, the Commission executed a Programmatic Agreement (PA) on March 12, 2012 with the Washington SHPO and the Colville Tribe's acting Tribal Historic Preservation Officer. The Commission also invited Douglas PUD, BLM, and U.S. Bureau of Indian Affairs to concur with the stipulations of the PA. Douglas PUD and BLM concurred. The PA requires the licensee to implement the Historic Properties Management Plan (HPMP), dated May 2010, for the term of any new license issued for this project. Execution of the PA demonstrates the Commission's compliance with section 106 of the NHPA. Article 410 requires the licensee to implement the PA and associated HPMP.

### **PACIFIC NORTHWEST ELECTRIC POWER PLANNING AND CONSERVATION ACT**

78. In 1980, Congress enacted the Pacific Northwest Electric Power Planning and Conservation Act (Northwest Power Act).<sup>50</sup> This act created the Northwest Power

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<sup>48</sup> 16 U.S.C. § 470 *et seq.* (2006).

<sup>49</sup> 36 C.F.R. Part 800 (2012).

<sup>50</sup> 16 U.S.C. §§ 839b *et seq.* (2006).

Planning Council (now known as the Northwest Power and Conservation Council) and directed it to develop a Columbia River Basin Fish and Wildlife Program (Program). The goals of the Program are to protect, mitigate, and enhance fish and wildlife resources affected by the development and operation of hydroelectric projects on the Columbia River and its tributaries, while assuring the Pacific Northwest an adequate, efficient, economical, and reliable power supply.<sup>51</sup> Section 4(h)(11)(A) of the Northwest Power Act, provides that federal agencies operating or regulating hydroelectric projects within the Columbia River Basin shall exercise their responsibilities to provide equitable treatment for fish and wildlife resources with other purposes for which the river system is utilized and shall take the Council's Program into account “at each relevant stage of decision-making processes to the fullest extent practicable.”<sup>52</sup>

79. To mitigate harm to fish and wildlife resources, the Council has adopted specific provisions to be considered in the licensing or relicensing of non-federal hydropower projects (Appendix B of the Program). This license, among other things, includes: salmon, steelhead, and Pacific lamprey conservation measures (Appendix A, condition 6.5; Appendix B, article 1; Appendix C, conditions 2.3, 3.0, 5.0-5.8, 6.0; and Appendix D); resident fish species enhancement measures (Appendix A, condition 6.5; Appendix C, conditions 4.0-4.8; and Appendix E, conditions 1-13); and wildlife habitat protection (Articles 409 and Ordering Paragraph I), all of which are consistent with applicable provisions of the Program, as discussed in detail in the final EIS. As part of the Program, the Council has designated over 40,000 miles of river in the Pacific Northwest region as not being suitable for hydroelectric development ("protected area"). The project is not located within a protected area designated under Appendix B of the Program. Further, Article 408 reserves to the Commission the authority to require future alterations in project structures and operations to take into account, to the fullest extent practicable, the applicable provisions of the Program.

#### **RECOMMENDATIONS OF FEDERAL AND STATE FISH AND WILDLIFE AGENCIES PURSUANT TO SECTION 10(j) OF THE FPA**

80. Section 10(j)(1) of the FPA<sup>53</sup> requires the Commission, when issuing a license, to include conditions based on recommendations by federal and state fish and wildlife agencies submitted pursuant to the Fish and Wildlife Coordination Act<sup>54</sup> to “adequately

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<sup>51</sup> 16 U.S.C. § 839b(h)(5) (2006).

<sup>52</sup> 16 U.S.C. § 839(h)(11)(A) (2006).

<sup>53</sup> 16 U.S.C. § 803(j)(1) (2006).

<sup>54</sup> 16 U.S.C. §§ 661 *et seq.* (2006).

and equitably protect, mitigate damages to, and enhance fish and wildlife (including related spawning grounds and habitat)” affected by the project.

81. In response to the August 10, 2010 public notice that the project was ready for environmental analysis, NMFS, Washington DFW, and FWS filed a total of 54 recommendations under section 10(j).<sup>55</sup> Forty-three recommendations were determined to be outside the scope of section 10(j) because they are measures that: include provisions for non-specific or future potential measures; are located at off-project locations; have no nexus to project effects or purposes; are studies that could have been conducted prior to licensing; include cost sharing with a third-party; or are administrative matters. Recommendations outside of the scope of section 10(j) are discussed in the next section.

82. This license includes conditions consistent with the 11 remaining recommendations that are within the scope of section 10(j) including: continuing to implement the Wells HCP (Ordering Paragraphs D, E, and G); implementing certain provisions of the Aquatic Agreement’s Water Quality Management, Bull Trout Management, Pacific Lamprey Management, White Sturgeon Management, and Aquatic Nuisance Species Management Plans (Ordering Paragraphs D, F, and H);<sup>56</sup> and implementing the Wildlife and Botanical Management Plan (Article 409) and Avian Protection Plan (Ordering Paragraph I).

### **SECTION 10(a)(1) OF THE FPA**

83. Section 10(a)(1) of the FPA<sup>57</sup> requires that any project for which the Commission issues a license shall be best adapted to a comprehensive plan for improving or developing a waterway or waterways for the use or benefit of interstate or foreign commerce; for the improvement and utilization of waterpower development; for the adequate protection, mitigation, and enhancement of fish and wildlife; and for other beneficial public uses, including irrigation, flood control, water supply, recreation, and other purposes. Fish and wildlife measures recommended by NMFS, Interior, and Washington DFW considered under section 10(a) rather than under section 10(j) are addressed first, followed by additional staff recommended measures.

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<sup>55</sup> FWS filed recommendations on October 6, 2010, and amended them on November 19, 2010. NMFS and Washington DFW filed recommendations on October 8, 2010.

<sup>56</sup> The specific provisions of these plans that were recommended by staff were discussed in detail in the final EIS at 230 through 239.

<sup>57</sup> 16 U.S.C. § 803(a)(1) (2006).



**A. NMFS, Interior, and Washington DFW**

84. As discussed above, NMFS, FWS, and Washington DFW filed 43 recommendations under section 10(j) that are not specific measures to protect, mitigate damages to, or enhance fish and wildlife. Consequently, these recommendations are not considered under section 10(j) of the FPA, but are considered under the broad public interest standard of section 10(a)(1). As discussed below, 40 of these recommendations filed pursuant to section 10(j) are included in the license.

85. Thirteen of these fish and wildlife agency recommendations were recommended by staff in the final EIS<sup>58</sup> and are included in the license including: (1) limiting the license term to no longer than the term of the Wells HCP; (2) transmitting hourly TDG data to a web-accessible database (Ordering Paragraphs D and G); (3) coordinating the annual Wells HCP Project Fish Bypass/Spill Operations Plan and Gas Abatement Plan to minimize total dissolved gas levels during periods of spill, and submit proposed operations to the Aquatic SWG and Wells HCP Coordinating Committee (Ordering Paragraphs D and G); (4) developing a Gas Abatement Plan annually and submitting it to Washington DOE by February 28 of each year (Ordering Paragraphs D and G); (5) making water quality data available to EPA to assist in development of the Columbia River temperature total maximum daily load (Ordering Paragraphs D and G); (6) allowing Washington DOE staff access to the project after reasonable notice to Douglas PUD (Ordering Paragraphs D and G); (7) coordinating project operation with other mid-Columbia hydroelectric projects after appropriate notice (Ordering Paragraphs D and G); (8) constructing a bull trout interpretive display at the Wells Dam Visitor Center (Ordering Paragraph D); (9) counting adult Pacific lamprey 24-hours-per-day during the adult fish ladder monitoring season (May 1 to November 15) (Ordering Paragraphs D and F); (10) continuing to implement Douglas PUD's Land Use Policy (Article 412); (11) implementing best management practices to contain aquatic nuisance species during modification of recreation measures (Ordering Paragraph D); (12) notifying the agencies and implement containment measures if aquatic nuisance species are detected (Ordering Paragraph D); and (13) consulting annually with FWS and the Terrestrial Resources Working Group (Terrestrial RWG)<sup>59</sup> when preparing annual reports for the Wildlife and Botanical Management Plan (Article 409).

86. Twenty seven of the fish and wildlife agency recommendations were not recommended by staff in the EIS, however these recommendation are required in this

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<sup>58</sup> See final EIS at 235–251.

<sup>59</sup> Members of the Terrestrial RWG include FWS, BLM, Washington DFW, Colville Tribes, and Douglas PUD.

license under section 401 of the CWA, section 18 of the FPA, or to be consistent with the FWS or NMFS biological opinion incidental take statements under section 7 of the ESA.

87. As discussed in the final EIS,<sup>60</sup> staff did not recommend developing a mid-Columbia white sturgeon hatchery facility because it required cost sharing among Douglas, Chelan, and Grant PUDs (Ordering Paragraph D).

88. Staff did not recommend the following measures because they required implementing as-yet unidentified and uncertain future potential measures: (1) measures to address future instances of non-compliance with state water quality standards (Ordering Paragraphs D and G); (2) future measures from Columbia River temperature total maximum daily load development (Ordering Paragraphs D and G); (3) plans, measures, or modifications to project facilities or operations to address exceedances of bull trout passage criteria or allowable bull trout incidental take without any specific measures that would be implemented (Ordering Paragraphs D, F, and H); (4) an Operations Study Plan to evaluate and implement potential as-yet unidentified operational measures to enhance upstream lamprey passage (Ordering Paragraphs D and F); (5) proposals to use the most-current technology commercially available to count adult Pacific lamprey without identifying specific measures that would be implemented toward that end (Ordering Paragraphs D and F); (6) potential alternative measures to improve lamprey counting (Ordering Paragraphs D and F); (7) measures to improve adult lamprey passage until performance is at a level similar to other mid-Columbia hydroelectric projects, or until compliance with an as-yet unidentified standard is achieved (Ordering Paragraphs D and F); (8) a juvenile lamprey downstream passage evaluation if future appropriate technology is developed during the license term to conduct such a study, and measures if the evaluation indicates that Wells Project operations are adversely affecting lamprey populations above Wells dam (Ordering Paragraphs D and F); (9) potential adult sturgeon passage measures that are consistent with passage measures implemented at other mid-Columbia projects (Ordering Paragraph D); (10) measures to address significant negative changes to native resident fish populations (Ordering Paragraph D); (11) an assessment to identify the potential effects of future changes in project operations on native resident fish, and measures to address potential effects (Ordering Paragraph D); (12) conducting resident fish studies and implementing as-yet unidentified measures, throughout the license term, to determine the relative abundance of various resident fish species within Wells reservoir; and (13) measures to address adverse effects on aquatic resources due to future potential changes in project operations that cause an increase in the proliferation of aquatic nuisance species (Ordering Paragraph D).

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<sup>60</sup> See final EIS at 243 through 259.

89. Staff did not recommend the following measures because they are too broad in scope and general in nature to effectively enforce as license conditions: (1) participating in the Columbia and Snake River Spill Response Initiative, regional Water Quality Team, and Adaptive Management Team meetings (Ordering Paragraphs D and G); (2) participating in regional information exchanges for bull trout research and monitoring (Ordering Paragraph D); and (3) participating in information exchanges and regional efforts to coordinate monitoring activities for aquatic nuisance species (Ordering Paragraph D).

90. Staff did not recommend the following measures because they are unrelated to project-specific effects or purposes in the project area: (1) collecting tissue samples and funding genetic analysis of sampled bull trout throughout the mid-Columbia River and its tributaries; (2) monitoring and studying bull trout incidental take at off-project hatcheries and broodstock collection facilities (Ordering Paragraphs D and H); (3) conducting a literature review on the effectiveness of upstream passage measures implemented at other Columbia and Snake River hydroelectric projects (Ordering Paragraphs D and F); (4) compiling information on other white sturgeon supplementation and recovery programs in the Columbia River Basin (Ordering Paragraph D); and (5) conducting literature reviews at 5-year intervals to evaluate juvenile lamprey passage at other Columbia and Snake River hydroelectric projects and participating in Pacific lamprey regional work groups to support regional conservation efforts (Ordering Paragraph D).

91. Staff did not recommend the following measures because they are administrative in nature or measures that are not needed to address project effects: (1) implementing a study to examine the presence and relative abundance of juvenile lamprey in habitat affected by the project without justification of why this information is needed or how it would be used; (2) preparing annual reports on activities related to resident fish management; (3) requiring Aquatic SWG approval of the Wells HCP Project Fish Bypass/Spill Operations Plan; (4) considering the draft reasonable and prudent measures included in the Bull Trout Management Plan; and (5) identifying appropriate white sturgeon measures as opportunities for education to local public entities.

92. Three fish and wildlife agency recommendations are not mandatory and are not included in this license. Washington DFW and FWS recommended that the Commission issue a 50 year license for the Wells Project. Licensing term is discussed in the License Term section of this order. FWS recommended that Douglas PUD use the Wells Aquatic SWG and the Terrestrial RWG as the primary forums to ensure consistency and timely coordination with the committees established by the Wells HCP. The Commission does not object to the licensee and other entities establishing work groups and forums; however, the Commission only has jurisdiction over the licensee and cannot enforce provisions against parties other than the licensee. The entities involved in the working groups and the HCP Coordinating Committee may voluntarily coordinate the implementation of the HCP, but this recommendation is not an appropriate license

requirement. FWS also recommended that Douglas PUD conduct annual coordination meetings with the Terrestrial RWG and the FWS to provide updates on the success of the mitigation measures implemented under the Wildlife and Botanical Management Plan. This recommendation would not be enforceable by the Commission since it cannot require the attendance of other parties to the meetings.

## **B. Other Section 10(a)(1) Recommendations**

### **Deviations from License Requirements**

93. The Aquatic Agreement's Water Quality Management Plan includes provisions to notify the Aquatic SWG and Washington DOE in the event that water quality monitoring indicates the project is causing deviations from state water quality criteria, and develop and implement plans, as directed by the Aquatic SWG, to address any project-related adverse effects on water quality. The plans may include changes to project operations or facilities, if necessary, to address adverse effects. In the event that the Aquatic SWG directs Douglas PUD to modify project operations or facilities to address deviations from state water quality criteria, the Aquatic Agreement also includes a provision for Douglas PUD to obtain Commission approval prior to implementing any substantial modifications to project facilities or operations.

94. In the final EIS, Commission staff noted that all permanent modifications to approved project facilities and operations, regardless of whether Douglas PUD considers them to be substantial, would require license amendments. Therefore, staff recommended and this license requires Douglas PUD to notify the Commission and file an application to amend the license prior to implementing any permanent long-term changes to approved project operations or facilities. However, staff also noted that some short-term or temporary modifications to approved project operations or facilities may be necessary to address water quality criteria deviations, or emergency situations or circumstances outside of the control of the licensee (e.g., flood flow conditions). Consistent with staff's recommendation, Article 403 requires Douglas PUD to notify the Commission within 48 hours of any temporary modifications to approved project operations or facilities that are necessary to protect aquatic resources or in the event of emergency situations at the project.

### **Bull Trout Stranding and Incidental Take Monitoring**

95. The Aquatic Agreement's Bull Trout Management Plan includes provisions to implement fish stranding evaluations during periods of low reservoir elevation, and monitoring studies to document incidental take of bull trout during implementation of

other aquatic resource measures and fish hatchery activities at project and non-project facilities. All of the proposed stranding evaluations and monitoring studies are mandatory conditions. In the EIS, staff recommended that Douglas PUD conduct the stranding evaluations and all of the proposed monitoring studies that would be implemented at project facilities. However, because the proposed studies lack sufficient detail to enable Commission administration and enforcement as license conditions, staff recommended that Douglas PUD prepare and file a detailed plan and schedule for implementing the stranding evaluations and monitoring studies.<sup>61</sup> Consistent with staff's recommendation, Article 402 requires Douglas PUD to prepare a monitoring plan to carry out the stranding evaluations and monitoring studies to the extent that the monitoring studies address the Wells Project facilities.<sup>62</sup>

96. All other bull trout monitoring studies are included in Washington DOE's water quality certification (Appendix A), Interior's section 18 prescription (Appendix C), or FWS' biological opinion incidental take statement (Appendix E), and thus are a requirement of the license.

### **Hatchery Genetic Management Plans**

97. Douglas PUD proposes to implement hatchery genetic management plans for the project's Wells Hatchery and the non-project Methow Hatchery to address the effects of Wells HCP hatchery fish production on ESA-listed salmon and steelhead. Douglas PUD filed a hatchery genetic management plan for the Methow Hatchery UCR spring Chinook program with its license application. The Wells Hatchery UCR steelhead hatchery genetic management plan is still under development and has not been filed.

98. In the final EIS,<sup>63</sup> staff concluded that modifications to the Wells Hatchery that may be recommended through implementation of the proposed hatchery genetic management plan could require changes to project facilities that would require Commission authorization. To provide for Commission oversight of any modifications to the project that are necessary to implement the hatchery genetic management plan, Article 404 requires Douglas PUD to complete and file the Wells Hatchery UCR steelhead hatchery genetic management plan for Commission approval within one year of license issuance.

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<sup>61</sup> See final EIS at 233.

<sup>62</sup> Plans for monitoring studies at non-project facilities are not required to be filed for Commission approval.

<sup>63</sup> See final EIS at 230 and A-3.

99. The Methow Hatchery UCR spring Chinook hatchery genetic management plan is not included in this license because the Methow Hatchery is a non-project facility.

### **Aquatic Resource Management Plan Annual Report**

100. The Aquatic Agreement includes a provision to file an annual report with the Commission by May 31<sup>st</sup> of each year of the license to document all studies, measures, and activities implemented in the previous year pursuant to each of the Aquatic Agreement aquatic resources management plans. The annual report would enable the Commission to administer compliance with license requirements for implementing the aquatic resource management plans. Article 406 requires the annual report.

### **Aquatic Nuisance Species Management Plan**

101. The Aquatic Agreement's Aquatic Nuisance Species Management Plan includes measures designed to prevent the introduction and spread of non-native aquatic species in the project area. The measures include aquatic nuisance species containment methods during construction of recreation enhancement measures, monitoring for the presence of zebra and quagga mussels, and management measures consistent with aquatic nuisance species management protocols in the event that either species is detected in the project area during the term of the license. In the final EIS,<sup>64</sup> staff recommended the plan; however, staff also recommended that the plan be modified to include the specific management practices to control the spread of aquatic nuisance species during construction of recreation enhancement measures, and the specific containment measures that would be implemented if zebra or quagga mussels are detected during the monitoring. Article 405 requires Douglas PUD to modify the Aquatic Nuisance Species Management Plan accordingly.

### **Wildlife and Botanical Management Plan**

102. Douglas PUD filed a Wildlife and Botanical Management Plan with proposed measures for noxious weeds, special-status plants and wildlife, and riparian and wetland habitat. Implementing the plan would improve Douglas PUD's ability to prevent, detect, and control noxious weeds without inadvertent damage to non-target species or to herbicide-sensitive individuals; protect special-status plants; protect existing roost and perch habitat for bald eagles and ensure recruitment of suitable perch trees in the future; improve potential winter cover and forage for sharp-tailed grouse; reduce disturbance to American white pelicans that rest and forage on the reservoir; improve the condition of wetland and riparian habitat that could be used by amphibians and waterfowl at Cassimer Bar and Bridgeport Bar; and provide additional forage for waterfowl. In the final EIS,<sup>65</sup>

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<sup>64</sup> See final EIS at 239.

<sup>65</sup> See final EIS at 239-241.

staff recommended the plan with additional modifications, which include annually reviewing the Washington National Heritage Program rare plant list and providing an updated list of sensitive species in the annual reports required under the Plan. Staff also recommended that Douglas PUD prepare the recommended annual reports in consultation with the Terrestrial RWG and Washington DOE because this would provide the resource agencies and the Commission a mechanism for determining if the management objectives are being achieved and if modifications to the plan are warranted. Consistent with these staff recommendations, Article 409 requires Douglas PUD to modify the Wildlife and Botanical Management Plan to incorporate staff's recommended additions, and file the plan for Commission approval prior to implementation.

### **Avian Protection Plan**

103. Douglas PUD proposes to implement an avian protection plan for the project's transmission line to minimize the risk of avian collision and electrocution. The plan includes: installing flight diverters on the transmission line where it crosses the Columbia River, if new conductors, static wires, or aviation markers are being replaced; using light-emitting designs (if available) to improve visibility in low-light conditions; maintaining records of avian mortalities and reporting all mortalities attributed to the transmission line to FWS through the online injury/fatality reporting program; implementing a nest management protocol developed in consultation with FWS and Washington DFG; limiting conifer tree-clearing within the transmission line right-of-way to between August 31 and January 31; training utility personnel to understand avian issues, protocols, vegetation management, and compliance regulations; meeting with resource agencies to discuss management of wildlife and botanical resources in the transmission corridor; and modifying the plan only with the agreement of FWS and Washington DFW, with proposed changes to be reported to the Commission for review and approval. The Avian Protection Plan is made part of this license under Ordering Paragraph I.

### **Recreation Management Plan**

104. Douglas PUD proposes to implement the Recreation Management Plan which includes: (1) a Recreation Facility Improvement Program with construction of a boat-in tent camping facility for non-motorized boat users in the vicinity of the Okanogan River; and (2) a Recreation Facility Operation, Maintenance and Monitoring Program. In the final EIS,<sup>66</sup> staff concluded that these measures would help ensure that public access and recreation needs are met for the term of the new license, enhance the aesthetic quality and the physical condition of project-related recreational facilities, and reduce recreation-related adverse effects on environmental resources. Douglas PUD has not yet determined

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<sup>66</sup> See final EIS at 194–201.

a location for the boat-in tent camping facility in the vicinity of the Okanogan River. In its comments on the draft EIS, Douglas PUD requested an extension of the Commission's deadline for determining the campsite location from six months to one year from the license issuance to allow sufficient time to consult with stakeholders. Article 411 requires the licensee to implement the Recreation Management Plan and to file a supplement to the Recreation Management Plan within one year of license issuance that includes a map depicting the exact location where the proposed non-motorized campsite would be constructed.

## **OTHER ISSUES**

### **A. Encroachment**

105. Encroachment occurs when the tailwater elevation of a hydroelectric project is adversely impacted by the forebay elevation of another project located immediately downstream of the first. The tailwater elevation of the Corps' upstream Chief Joseph Project was increased when the Wells Project was constructed. Article 32 of the current license requires Douglas PUD to compensate the United States for tailwater elevation encroachment. Pursuant to this article, Douglas PUD and the Corps reached a compensation agreement that expired on May 31, 2012. On November 9, 2011, BPA, the Corps, and Douglas PUD filed an agreement in principle to continue to provide encroachment compensation and a request that such provision be included in the new license for the Wells Project, compensable pursuant to FPA section 10(c).<sup>67</sup> Accordingly, Article 203 requires Douglas PUD to compensate for this encroachment consistent with FPA section 10(c) and the principles set forth in the November 9, 2011 filing.

### **B. Compensation for the Confederated Tribes of the Colville Reservations**

106. Section 10(e)(1) of the FPA<sup>68</sup> provides in pertinent part:

when licenses are issued involving the use of . . . tribal lands embraced within Indian Reservations the Commission shall . . . , subject to the approval of the Indian Tribe having jurisdiction of such lands . . . , fix a reasonable annual charge for the use thereof.

107. On February 11, 2005, the Commission approved the Colville Settlement Agreement, which was intended to settle and resolve all claims by the Colville against Douglas PUD regarding past, present, and future section 10(e) payments for the use of

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<sup>67</sup> 16 U.S.C. § 803(c) (2006).

<sup>68</sup> 16 U.S.C. § 803(e)(10) (2006).



tribal lands within the project boundary.<sup>69</sup> The settlement agreement covered all claims as of the effective date of the agreement for the duration of the original license and for the duration of any new license issued to Douglas PUD. The settlement agreement has three components: (1) a one time payment from Douglas PUD to the Colville; (2) a land transfer of Douglas PUD's non-project property to the Colville; and (3) Douglas PUD's ongoing responsibility to sell to the Colville a share of the project's power output. The first two components have been completed. Article 202 requires Douglas PUD to continue to sell a share of power to the Colville.

### **C. Canadian Entitlement**

108. In 1964, the United States and Canada finalized the Columbia River Treaty, under which the two nations jointly regulate and manage the Columbia River for power and flood control. Article 38 of the current license requires Douglas PUD to make available to the federal system (i.e., BPA) for delivery to Canada, the portion of the project's power that is attributable to Canadian storage projects (i.e., headwater benefits), as determined to be due to Canadian interests under the procedures established pursuant to the treaty.<sup>70</sup> BPA and the Corps recommend that this provision be included in the new license. I agree. Accordingly, Article 204 of this license includes the language of Article 38 of the original license.

### **D. Flood Control**

109. The Flood Control Act of 1936 requires the Corps and the Commission to provide for flood control for the Columbia River within the Columbia Basin. Article 34 of the current license requires the Corps' District Engineer to inform Douglas PUD of the storage space to be provided in the Wells Project reservoir to compensate for valley storage that may be expected to be lost during the ensuing flood season. The article requires Douglas PUD to provide storage space up to 500,000 acre-feet. In addition, Douglas PUD must meet certain conditions, such as reservoir drawdown and release timing, as determined by the Corps. This storage is intended for very large floods, and although extensive upstream storage development has reduced the frequency of such floods, they could still occur. BPA and the Corps recommend including this article for flood control in the new license. I agree. Article 205 requires Douglas PUD to provide

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<sup>69</sup> 110 FERC ¶ 61,128 (2005).

<sup>70</sup> Douglas PUD has entered into an agreement with the BPA and the Corps that allow Douglas PUD to take advantage of improved streamflow as a result of Canadian storage as long as Douglas PUD delivers to BPA and the Corps the portion of the Canadian entitlement generated at its project. In 1998, the Commission approved this agreement, pursuant to the FPA section 22, 16 U.S.C. § 815 (2006). It expires in 2024.

this storage space.

## **ADMINISTRATIVE PROVISIONS**

### **A. Annual Charges**

110. The Commission collects annual charges from licensees for administration of the FPA. Article 201 provides for the collection of funds for administration of the FPA and use and occupancy of U.S. lands.

### **B. Exhibit F and G Drawings**

111. The Commission requires licensees to file sets of approved project drawings on microfilm and in electronic file format. Article 206 requires the filing of the approved drawings.

112. Because Douglas PUD will be modifying some of its Exhibit G drawings to include a proposed boat-in tent camping facility, a camping area near the Wells dam, and an expanded recreation area at Marina Park, Article 207 requires the filing of revised Exhibit G drawings. In addition, Sheets G-T1 through G-T5 of the Exhibit G drawings are currently labeled “Project Boundary and Location Map.”, but these drawings refer to the transmission line corridor. Therefore, they must be relabeled as “Transmission Line Corridor” and renumbered from G-65 through G-69. Finally, because all of the Exhibit G drawings include the word “preliminary” above the surveyor’s stamp. Article 207 requires the filing of revised Exhibit G drawings with this word removed.

### **C. Headwater Benefits**

113. Some hydropower projects directly benefit from headwater improvements that were constructed by other licensees, the United States, or permittees. In their comments to the REA notice, BPA and the Corps recommend that we include the headwater benefits requirement in the new license. Article 208 requires Douglas PUD to reimburse such entities for these benefits if they were not previously assessed and reimbursed.

### **D. Use and Occupancy of Project Lands and Waters**

114. Requiring a licensee to obtain prior Commission approval for every use or occupancy of project land would be unduly burdensome. Therefore, Article 413 allows the licensee to grant permission, without prior Commission approval, for the use and occupancy of project lands for such minor activities as landscape planting. Such uses must be consistent with the purposes of protecting and enhancing the scenic, recreational, and environmental values of the project.

### **E. Review of Final Plans and Specifications**

115. Where new construction or modifications to the project are involved, the Commission requires licensees to file revised drawings of project features as built. Article 301 provides for the filing of these drawings.

### **F. Commission Approval of Resource Plans, Reports, Notification, and Filing of Amendments**

116. In Appendices A, C, D, and E, there are certain certification conditions, fishway prescriptions, and terms and conditions of the NMFS and FWS incidental take statements that either do not require the licensee to file plans or reports with the Commission or do not provide for consultation with the appropriate agencies during plan or report development. Therefore, Article 401 requires the licensee to consult with the agencies during plan development, file reports with the Commission, file plans with the Commission for approval, and file amendment applications, as appropriate.

## **STATE AND FEDERAL COMPREHENSIVE PLANS**

117. Section 10(a)(2)(A) of the FPA<sup>71</sup> requires the Commission to consider the extent to which a project is consistent with federal and state comprehensive plans for improving, developing, or conserving a waterway or waterways affected by the project.<sup>72</sup> Under section 10(a)(2)(A), federal and state agencies filed 74 comprehensive plans that address various resources in Washington. Of these, staff identified and reviewed 29 plans that are relevant to this project.<sup>73</sup> No conflicts were found.

## **APPLICANT'S PLANS AND CAPABILITIES**

118. In accordance with sections 10(a)(2)(C) and 15(a) of the FPA,<sup>74</sup> Commission staff evaluated Douglas PUD's record as a licensee for these areas: (1) conservation efforts; (2) compliance history and ability to comply with the new license; (3) safe management, operation, and maintenance of the project; (4) ability to provide efficient and reliable electric service; (5) need for power; (6) transmission services; (7) cost effectiveness of

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<sup>71</sup> 16 U.S.C. § 803(a)(2)(A) (2006).

<sup>72</sup> Comprehensive plans for this purpose are defined at 18 C.F.R. § 2.19 (2012).

<sup>73</sup> The list of applicable plans can be found in section 5.5 of the final EIS.

<sup>74</sup> 16 U.S.C. § 803(a)(2)(C) and 808(a) (2006).

plans; and (8) actions affecting the public. I accept the staff's findings in each of the following areas.

#### **A. Conservation Efforts**

119. Section 10(a)(2)(C) of the FPA requires the Commission to consider the extent of electricity consumption efficiency improvement programs in the case of license applicants primarily engaged in the generation or sale of electric power, like Douglas PUD. Each year, Douglas PUD completes a comprehensive analysis of future load growth and the need for new resources, including customer efficiency programs, to meet its customer demand. In the most recent report, Douglas PUD proposed demand side management actions and goals to promote demand side load management practices for both residential and commercial/industrial customers. The report also showed that Douglas PUD has undertaken several programs to improve efficiency and promote energy conservation at its own plants. These programs show that Douglas PUD is making an effort to conserve electricity and has made a satisfactory good faith effort to comply with section 10(a)(2)(C) of the FPA.

#### **B. Compliance History and Ability to Comply with the New License**

120. Based on a review of Douglas PUD's compliance with the terms and conditions of the existing license, Douglas PUD's overall record of making timely filings and compliance with its license is satisfactory. Therefore, Douglas PUD has the ability to satisfy the conditions of a new license.

#### **C. Safe Management, Operation, and Maintenance of the Project**

121. Staff have reviewed Douglas PUD's management, operation, and maintenance of the Wells Project pursuant to the requirements of 18 C.F.R. Part 12 and the Commission's Engineering Guidelines. Staff concludes that there is no reason to believe that Douglas PUD cannot continue to safely manage, operate, and maintain the dam and other project works in accordance with the Commission's standards and oversight under a new license.

#### **D. Ability to Provide Efficient and Reliable Electric Service**

122. Staff have reviewed Douglas PUD's plans and its ability to operate and maintain the project in a manner most likely to provide efficient and reliable electric service. Staff's review indicates that Douglas PUD regularly inspects the project turbine generator units to ensure they continue to perform in an optimal manner, schedules maintenance to minimize effects on energy production, and since the project has been in operation, has undertaken several initiatives to ensure the project is able to operate reliably into the future. Therefore, Douglas PUD is capable of operating the project to provide efficient and reliable electric service in the future.

### **E. Need for Power**

123. Douglas PUD serves about 18,000 retail customers in Douglas County, Washington. The Wells Project is the only generating facility owned and operated by Douglas PUD, which also has contracts to purchase power from Chelan PUD's Rocky Reach Project and the Nine Canyon Wind Project. The 774.25-MW Wells Project produces approximately 4,077,400 megawatt-hours (MWh) per year. Project power is sold under long-term contracts to four wholesale power purchasers, helping to meet the electrical power needs of consumers throughout the Pacific Northwest region.

124. Douglas PUD's 2007 Integrated Resource Plan update predicts that Douglas PUD will have adequate resources to meet its peak customer load through 2018.

125. The Wells Project is located within the Northwest subregion of the Western Electricity Coordinating Council region of the North American Electric Reliability Corporation (NERC). According to NERC's 2010 forecast, winter peak demand and annual demand requirements for the Northwest subregion are projected to grow at a rate of 1.1 percent and 1.2 percent, respectively, from 2010 through 2019.

126. Power from the Wells Project can continue to serve Douglas PUD's customers as well as meet part of the regional need for power.

### **F. Transmission Services**

127. The project includes two 41-mile-long transmission lines that deliver project power to Douglas PUD's bulk transmission grid at the Douglas switchyard near Rocky Reach dam. Douglas PUD proposes no changes that would affect its own or other transmission services in the region. The project and project transmission lines are important elements in providing power and voltage control to local Douglas County communities and the region.

### **G. Cost Effectiveness of Plans**

128. Douglas PUD does not propose any capacity expansion at the project and based on the available flow, staff do not expect any additional capacity to be cost-effective at this site. As discussed in this order, Douglas PUD proposes several measures and plans for the enhancement of fish and wildlife, recreation, and cultural resources at the project. Based on Douglas PUD's record as an existing licensee, staff concludes that these plans are likely to be carried out in a cost-effective manner.

### **H. Actions Affecting the Public**

129. Douglas PUD provided extensive opportunity for public involvement in the development of its application for a new license for the Wells Project. During the previous license period, Douglas PUD provided facilities to enhance public use of project

lands and facilities and operated the project with consideration for the protection of downstream uses of the mid-Columbia River. Douglas PUD uses the project to help meet local and regional power needs.

## PROJECT ECONOMICS

130. In determining whether to issue a new license for an existing hydroelectric project, the Commission considers a number of public interest factors, including the economic benefits of project power. Under the Commission's approach to evaluating the economics of hydropower projects, as articulated in *Mead Corp.*,<sup>75</sup> the Commission uses current costs to compare the costs of the project and likely alternative power with no forecasts concerning potential future inflation, escalation, or deflation beyond the license issuance date. The basic purpose of the Commission's economic analysis is to provide a general estimate of the potential power benefits and the costs of a project, and of reasonable alternatives to project power. The estimate helps to support an informed decision concerning what is in the public interest with respect to a proposed license.

131. In applying this analysis to the Wells Project, we have considered three options: no action alternative, Douglas PUD's proposal, and the project as licensed herein. Under the no action alternative, the project would continue to operate as it does now. The project has an installed capacity of 774.25 MW, has a dependable capacity of 715 MW, and generates an average of 4,077,400 MWh of electricity annually. The average annual project cost is about \$70.4 million, or \$17.25/MWh. When we multiply our estimate of average generation by the alternative power cost of \$106.53/MWh,<sup>76</sup> staff gets a total value of the project's power of \$434.4 million in 2011 dollars. To determine whether the proposed project is currently economically beneficial, staff subtracts the project's cost from the value of the project's power.<sup>77</sup> Therefore, the project costs \$364.0 million, or \$89.28/MWh, less to produce power than the likely alternative cost of power.

132. As proposed by Douglas PUD, the levelized annual cost of operating the Wells Project is \$72.3 million, or \$17.73/MWh. Based on the same amount of estimated average generation of 4,077,400 MWh and alternative power cost of \$106.53/MWh, staff gets a total value of the project's power of \$434.4 million in 2011 dollars. Therefore, in

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<sup>75</sup> 72 FERC ¶ 61,027 (1995).

<sup>76</sup> The alternative power cost of \$106.53 per MWh is based on information obtained from a sales contract, U.S. Energy Information Administration fuel cost data, and regional bid prices.

<sup>77</sup> Details of staff's economic analysis for the project as licensed herein and for various alternatives are included in the final EIS issued October 2011.

the first year of operation, the project would cost \$362.1 million, or \$88.80/MWh, less than the likely alternative cost of power.

133. As licensed herein with the mandatory conditions and staff measures, the levelized annual cost of operating the project would be about \$72.1 million, or \$17.69/MWh. Based on the same amount of estimated average generation of 4,077,400 MWh as licensed, the project would produce power valued at \$434.4 million when multiplied by the \$106.53/MWh value of the project's power. Therefore, in the first year of operation, project power would cost \$362.2 million, or \$88.84/MWh, less than the likely cost of alternative power.

134. In considering public interest factors, the Commission takes into account that hydroelectric projects offer unique operational benefits to the electric utility system (ancillary service benefits). These benefits include their ability to help maintain the stability of a power system, such as by quickly adjusting power output to respond to rapid changes in system load; and to respond rapidly to a major utility system or regional blackout by providing a source of power to help restart fossil-fuel based generating stations and put them back online.

## **COMPREHENSIVE DEVELOPMENT**

135. Sections 4(e) and 10(a)(1) of the FPA<sup>78</sup> require the Commission to give equal consideration to power development purposes and to the purposes of energy conservation; the protection, mitigation of damage to, and enhancement of fish and wildlife; the protection of recreational opportunities; and the preservation of other aspects of environmental quality. Any license issued shall be such as in the Commission's judgment will be best adapted to a comprehensive plan for improving or developing a waterway or waterways for all beneficial public uses. The decision to license this project, and the terms and conditions included herein, reflect such consideration.

136. The EIS for the project contains background information, analysis of effects, and support for related license articles. The project will be safe if operated and maintained in accordance with the requirements of this license.

137. Based on my independent review and evaluation of the Wells Project, recommendations from the resource agencies and other stakeholders, and the no-action alternative, as documented in the final EIS, I have selected the proposed Wells Project, with the staff-recommended measures and mandatory conditions, and find that it is best adapted to a comprehensive plan for improving or developing the Columbia River.

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<sup>78</sup> 16 U.S.C. §§ 797(e) and 803(a)(1) (2006).

138. I selected this alternative because: (1) issuance of a new license will serve to maintain a beneficial, dependable, and an inexpensive source of electric energy; (2) the required environmental measures will protect and enhance fish and wildlife resources, water quality, recreational resources, and historic properties; and (3) the 774.25 MW of electric capacity comes from a renewable resource that does not contribute to atmospheric pollution.

## LICENSE TERM

139. Section 15(e) of the FPA<sup>79</sup> provides that any new license issued shall be for a term that the Commission determines to be in the public interest, but not less than 30 years or more than 50 years. Douglas PUD requested a 50-year license. Seven parties to the Aquatic Agreement and numerous other parties<sup>80</sup> support Douglas PUD's request for a 50-year license for the Wells Project.

140. The Commission's general policy is to establish 30-year terms for projects with little or no redevelopment, new construction, new capacity, or environmental mitigation and enhancement measures; 40-year terms for projects with a moderate amount of such activities; and 50-year terms for projects with extensive measures.<sup>81</sup> This license requires a moderate amount of mitigation and enhancement measures, including: continued implementation of the Wells HCP including fish passage; tributary enhancement and hatchery programs; implementation of a Wells Hatchery UCR Steelhead Hatchery Genetic Management Plan; implementation of management plans to protect and enhance water quality, bull trout, Pacific lamprey, white sturgeon, resident fish, and control aquatic nuisance species; implementation of plans that would protect and enhance wildlife and associated habitat; implementation of a plan to enhance recreation opportunities; and implementation of a plan to protect historic resources. Consequently, a license term of 40 years for the Wells Project is appropriate.

141. Douglas PUD argues the measures contained in the HCP that are carried over to the new license should be counted in favor of issuing a 50-year license. In the Commission's Rocky Reach rehearing order, the Commission explained that the HCP

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<sup>79</sup> 16 U.S.C. § 808(e) (2006).

<sup>80</sup> The following filed comments in support of a 50-year license: Congressmen Doc Hastings and David Reichert; Senators Patty Murray and Maria Cantwell; Congresswoman Cathy McMorris Rodgers; the cities of Pateros, Bridgeport, and Brewster; the Ports of Chelan and Douglas Counties; Puget Sound Energy; Avista; Public Utility District No. 1 of Okanogan County; Washington DOE; and the Douglas County Commissioners.

<sup>81</sup> See *Consumers Power Company*, 68 FERC ¶ 61,077, at 61,383-84 (1994).



provisions should be excluded from consideration for purposes of determining measures contained in the new license.<sup>82</sup> Moreover, it is the Commission's policy to coordinate to a reasonable extent the license expiration dates of projects in a river basin, in order that subsequent relicensing proceedings can also be coordinated.<sup>83</sup> As noted above, there are three nearby licensed projects in the mid-Columbia River basin: (1) Rocky Reach Project No. 2145, (2) Rock Island Project No. 943, and (3) Priest Rapids Project No. 2114.

142. Under the FPA, we cannot issue a new license with a term of less than 30 years; therefore, we cannot coordinate this license term with that for the Rock Island Project because it expires 16 years from now in 2028.

143. In 2008 and 2009, the Commission issued new licenses for, respectively, the Priest Rapids Project and the Rocky Reach Project. Both licenses expire in 2052.<sup>84</sup> Both the licensees for Rocky Reach and Wells Projects are parties to HCPs that include provisions for the protection of salmon and steelhead through a combination of project survival, hatchery programs and evaluations, and habitat restoration work. These HCPs will terminate in 2052. Accordingly, choosing a license term to coincide with the expiration of the HCPs (in 2052 or in 40 years) is not only consistent with the moderate amount of mitigation and enhancement measures included in this license, but will also allow future coordination among the Columbia River Basin projects.

The Commission orders:

(A) This license is issued to Public Utility District No. 1 of Douglas County (licensee), for a period of 40 years, effective the first day of the month in which this order is issued, to operate and maintain the Wells Project. This license is subject to the terms and conditions of the Federal Power Act (FPA), which is incorporated by reference as part of this license, and subject to the regulations the Commission issues under the provisions of the FPA.

(B) The project consists of:

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<sup>82</sup> 127 FERC ¶ 61,152 (2009).

<sup>83</sup> In issuing new and subsequent licenses, the Commission will coordinate the expiration dates of licenses to the maximum extent possible, to maximize future consideration of cumulative impacts in contemporaneous proceedings at relicensing. *See* 18 C.F.R. § 2.23 (2012).

<sup>84</sup> 123 FERC ¶ 61,049 (2008); 126 FERC ¶ 61,138, order on reh'g, 127 FERC ¶ 61,152 (2009)

(1) All lands, to the extent of the licensee's interest in these lands, described in the project description and the project boundary discussion of this order.

(2) Project works including: (a) a 1,130-foot-long, 168-foot-wide concrete hydrocombine dam with integrated generating units, spillways, switchyard, and juvenile fish passage facilities; (b) a 2,300-foot-long, 40-foot-high earth and rock-filled west embankment; (c) a 1,030-foot-long, 160-foot-high earth and rock-filled east embankment; (d) a 29.5-mile-long reservoir with surface area of about 9,740 acres, gross storage capacity of 331,200 acre-feet, and useable storage capacity of 97,985 acre-feet at normal pool elevation of 781 feet mean sea level; (e) eleven 46-foot-wide, 65-foot-high ogee-designed spillway bays with 2 vertical lift gates; (f) five spillway bays modified to accommodate the juvenile fish bypass system; (g) 10 turbine/generating units each with a 77.425-MW generator for a total installed capacity of 774.25 MW and a maximum hydraulic capacity of 22,000 cfs at an average gross head of 73 feet; (h) two 41-mile-long, 230-kV single-circuit transmission lines running parallel to each other; (i) the Wells Hatchery; and (j) appurtenant facilities.

The project works generally described above are more specifically shown and described by those portions of Exhibits A and F shown below:

Exhibit A: The following sections of Exhibit A filed on May 27, 2010:

Section 2, pages A-4 through A-16, entitled "Project Facilities," describing the mechanical, electrical, and transmission equipment within the application for license; section 3.1, pages A-16 through A-17, entitled "Wells Hatchery;" section 4.1, pages A-19 through A-23, entitled "Recreation Facilities within the Cities of Pateros, Brewster;" and section 4.2, pages A-24 through A-27, entitled "Recreation Sites Outside the Cities."

Exhibit F: The following Exhibit F drawings filed on May 27, 2010:

<u>Exhibit F Drawing</u>	<u>FERC No. 2149-</u>	<u>Description</u>
Sheet F-1	1001	Hydrocombine, General Layout
Sheet F-2	1002	Hydrocombine, The Unit
Sheet F-3	1003	Hydrocombine, The Spillway
Sheet F-4	1004	Hydrocombine, The Fish Facilities
Sheet F-5	1005	Hydrocombine, The Fish Facilities
Sheet F-6	1006	Hydrocombine, Longitudinal Sections
Sheet F-7	1007	Hydrocombine, Plan View
Sheet F-8	1008	Hydrocombine, Sectional Plan – El. 776
Sheet F-9	1009	Hydrocombine, Sectional Plan – El. 764

<u>Exhibit F Drawing</u>	<u>FERC No. 2149-</u>	<u>Description</u>
Sheet F-10	1010	Hydrocombine, Sectional Plan – El. 752
Sheet F-11	1011	Hydrocombine, Sectional Plan – El. 736
Sheet F-12	1012	Hydrocombine, Sectional Plan – El. 720
Sheet F-13	1013	Hydrocombine, Sectional Plan – El. 705
Sheet F-14	1014	Hydrocombine, Sectional Plan – El. 686 and 666
Sheet F-15	1015	Hydrocombine, Sectional Plan – El. 634
Sheet F-16	1016	Hydrocombine Fish Facilities, Sectional Plan
Sheet F-17	1017	Dam Embankments, West Embankment
Sheet F-18	1018	Dam Embankments, East Embankment – Sheet 1 of 4
Sheet F-19	1019	Dam Embankments, East Embankment – Sheet 2 of 4
Sheet F-20	1020	Dam Embankments, East Embankment – Sheet 3 of 4
Sheet F-21	1021	Dam Embankments, East Embankment – Sheet 4 of 4
Sheet F-22	1022	Hydrocombine Fish Bypass – Flow Barrier Panels

(3) All of the structures, fixtures, equipment, and facilities used to operate or maintain the project, all portable property that may be employed in connection with the project, and all riparian or other rights that are necessary or appropriate in the operation or maintenance of the project.

(C) Exhibits A and F described above are approved and made part of the license.

(D) This license is subject to the conditions submitted by the Washington Department of Ecology under section 401(a)(1) of the Clean Water Act, 33 U.S.C. § 1341(a)(1) (2006), as those conditions are set forth in Appendix A to this order.

(E) This license is subject to the conditions submitted by the Secretary of the U.S. Department of Commerce under section 18 of the FPA, as those conditions are set forth in Appendix B to this order.

(F) This license is subject to the conditions submitted by the Secretary of the U.S. Department of the Interior under section 18 of the FPA, as those conditions are set forth in Appendix C to this order.

(G) This license is subject to the incidental take terms and conditions of the biological opinion submitted by the National Marine Fisheries Service on March 7, 2012, under section 7 of the Endangered Species Act, as those conditions are set forth in Appendix D to this order.

(H) This license is subject to the incidental take terms and conditions of the biological opinion submitted by the U.S. Fish and Wildlife Service on March 19, 2012, under section 7 of the Endangered Species Act, as those conditions are set forth in Appendix E to this order.

(I) The Avian Protection Plan included as Appendix E-6 of Exhibit E of the final license application filed on May 27, 2010, is approved and made a part of the license.

(J) This license is also subject to the articles set forth in Form L-5 (October, 1975), entitled "Terms and Conditions of License for Constructed Major Project Affecting Navigable Waters and Lands of the United States," (*see* 54 F.P.C. 1832 et seq.), as reproduced at the end of this order, and the following additional articles:

Article 201. *Administrative Annual Charges.* The licensee shall pay the United States annual charges, effective the first day of the month in which the license is issued, and as determined in accordance with provisions of the Commission's regulations in effect from time to time, for the purposes of:

(a) reimbursing the United States for the cost of administration of Part I of the Federal Power Act. The authorized installed capacity for that purpose is 774.25 megawatts; and

(b) recompensing the United States for the use, occupancy, and enjoyment of 15.15 acres of its land (other than for transmission line right-of-way).

Article 202. *Compensation for the Confederated Tribes of the Colville Reservation.* Recompensing the Confederated Tribes of the Colville Reservation pursuant to the terms of the Colville Settlement Agreement and the Colville Power Sales Contract, dated August 18, 2004, between Douglas County Public Utility District No. 1 and the Confederated Tribes of the Colville Reservation, and filed with the Commission November 23, 2004, constitutes payment in full.

Article 203. *Encroachment.* With respect to compensation to the United States for the losses caused to the Chief Joseph Project by encroachment upon its tailwater by the operation of the Wells project:

(a) The licensee shall enter into an agreement with the Chief of Engineers, Department of the Army, or designated representative, to compensate the United States for encroachment on the Chief Joseph Project resulting from the operation of the Wells

Project. For Chief Joseph Units 1-16, the licensee will provide encroachment payments representing the difference in Chief Joseph generation with and without impact of the Wells Project in time and kind for the full Wells pool with updated efficiency curves. For Chief Joseph Units 17-27, the licensee will provide compensation for the excess water use between forebay elevations 779 and 781 feet mean sea level. Compensation will be based on the amount of water used by Chief Joseph Units 17-27 in excess of the hydraulic limit of the smaller units that would have been installed without the Wells Project. Encroachment compensation would not be automatically eliminated when Chief Joseph is spilling. The licensee will provide encroachment payments for water going through the turbines during instances when spill occurs at Chief Joseph, such as spilling for reserves or total dissolved gas management. The licensee will compensate the federal government for the mutually agreed incremental cost of the future unit replacements consistent with the licensee's 1963 compensation for the incremental cost of units 17-27.

(b) The licensee shall file the new encroachment agreement with the Commission for inclusion in the license.

Article 204. *Canadian Storage.* The licensee shall use the improved streamflow from Canadian storage projects for power production purposes, and make available to the federal system for delivery to Canada, or for its account, the project's share of coordinated system benefits resulting from such improved streamflows, both dependable hydroelectric capacity and average annual usable hydroelectric energy, as determined to be due to Canadian interests under the procedures established pursuant to any treaty between the United States and Canada relating to cooperative development of water resources of the Columbia River Basin.

Article 205. *Flood Control.* Each year before the beginning of flood runoff, the licensee shall gather from the District Engineer, U.S. Army Corps of Engineers, in charge of the locality, information relating to the amount of the storage space to be provided in the Wells Project reservoir to compensate approximately for valley storage that may be expected to be lost during the ensuing flood season. The licensee shall without cost to the United States provide this storage space in accordance with the following general procedures:

(a) The amount of storage space to be provided by the licensee will vary from zero acre-feet for a forecasted peak flow of 500,000 second-feet at The Dalles, Oregon, to approximately 125,000 acre-feet for a forecasted peak flow of 1,100,000 cubic feet per second at The Dalles, the forecasted flows to be as regulated by storage existing at the time of license. To the extent feasible and in order to minimize the duration of the drawdown of the Wells reservoir for valley storage replacement, the drawdown will be ordered by the District Engineer, not earlier than two weeks before the predicted date on which the observed flow at The Dalles is forecasted to equal or exceed 500,000 cubic feet per second and refill will be directed by the District Engineer generally within one week after voluntary filling of Grand Coulee Reservoir for flood control purposes is initiated.

(b) Detailed procedures for use of the valley storage replacement in the Wells reservoir will be included in a regulation manual to be prepared by the District Engineer.

Article 206. Exhibit F Drawings. Within 45 days of the date of issuance of the license, the licensee shall file the approved exhibit drawings in aperture card and electronic file formats.

(a) Four sets of the approved exhibit drawings shall be reproduced on silver or gelatin 35mm microfilm. All microfilm shall be mounted on type D (3-1/4" X 7-3/8") aperture cards. Prior to microfilming, the FERC Project-Drawing Number (i.e., P-2149-#### through P-2149-####) shall be shown in the margin below the title block of the approved drawing. After mounting, the FERC Drawing Number shall be typed on the upper right corner of each aperture card. Additionally, the Project Number, FERC Exhibit (i.e., F-1, etc.), Drawing Title, and date of this license shall be typed on the upper left corner of each aperture card.

Two of the sets of aperture cards along with form FERC-587 shall be filed with the Secretary of the Commission, ATTN: OEP/DHAC. The third set shall be filed with the Commission's Division of Dam Safety and Inspections Portland Regional Office.

(b) The licensee shall file two separate sets of exhibit drawings in electronic raster format with the Secretary of the Commission, ATTN: OEP/DHAC. A third set shall be filed with the Commission's Division of Dam Safety and Inspections Portland Regional Office. Exhibit F drawings must be separated from other project exhibits and identified as Critical Energy Infrastructure Information (CEII) material under 18 C.F.R. § 388.113(c) (2012). Each drawing must be a separate electronic file, and the file name shall include: FERC Project-Drawing Number, FERC Exhibit, Drawing Title, date of this license, and file extension in the following format [P-2149-####, F-1, Project Boundary, MM-DD-YYYY.TIF]. Electronic drawings shall meet the following format specification:

IMAGERY - black & white raster file  
FILE TYPE – Tagged Image File Format (TIFF), CCITT Group 4  
RESOLUTION – 300 dpi desired (200 dpi min)  
DRAWING SIZE FORMAT – 24" X 36" (min), 28" X 40" (max)  
FILE SIZE – less than 1 MB desired

Article 207. Revised Exhibit G Drawings. Within 90 days of the effective date of the license, the licensee shall file, for Commission approval, revised Exhibit G drawings enclosing within the project boundary all principal project works necessary for operation and maintenance of the project and identifying the location and name of each project recreation site, including:

(a) The proposed boat-in tent camping facility near the Okanogan River, the informal/rustic camping location near Wells dam, and the expanded recreation area at Marina Park.

(b) Sheets G-T1 through G-T5 renumbered as G-65 through G-69 and the description changed to “Transmission Line Corridor”.

(c) All Exhibit G drawings with the word “preliminary” above the surveyor’s stamp removed.

The Exhibit G drawings must comply with sections 4.39 and 4.41 of the Commission’s regulations.

Article 208. Headwater Benefits. If the licensee’s project was directly benefited by the construction work of another licensee, a permittee, or the United States on a storage reservoir or other headwater improvement during the term of the original license (including extension of that term by annual licenses), and if those headwater benefits were not previously assessed and reimbursed to the owner of the headwater improvement, the licensee shall reimburse the owner of the headwater improvement for those benefits, at such time as they are assessed, in the same manner as for benefits received during the term of this new license. The benefits will be assessed in accordance with Part 11, Subpart B, of the Commission’s regulations.

Article 301. As-Built Drawings. Within 90 days of completion of construction of the facilities directed by any article of this license (recreation facilities, etc.), the licensee shall file for Commission approval revised Exhibits A, F, and G, as applicable, to show those project facilities as built. A courtesy copy shall be filed with the Division of Dam Safety and Inspections (D2SI) Portland Regional Engineer, the Director, D2SI, and the Director, Division of Hydropower Administration and Compliance.

Article 401. Commission Approval and Filing of Amendments.

## (a) Requirement to File Plans for Commission Approval

Various conditions of this license found in Washington Department of Ecology's (Washington DOE's) water quality certification (Appendix A), U.S. Department of the Interior's (Interior's) section 18 fishway prescriptions (Appendix C), and National Marine Fisheries Service's (NMFS') incidental take statement terms and conditions (Appendix D) require the licensee to prepare plans in consultation with other entities for approval by Washington DOE, Interior, or NMFS and implement specific measures without prior Commission approval. Each such plan shall also be submitted to the Commission for approval. These plans are listed below.

<b>Washington DOE Certification Condition Number</b>	<b>Interior Section 18 Prescription Number</b>	<b>NMFS Incidental Take Statement Term and Condition Number</b>	<b>Plan Name or Measure</b>	<b>Due Date</b>
6.5 (section 4.1.1 of White Sturgeon Plan)			White Sturgeon Broodstock Collection and Breeding Plan	Within one year of license issuance
6.5 (section 4.1.5 of Pacific Lamprey Plan)	5.6.2		Lamprey Entrance Efficiency Plan	Within one year of license issuance
6.5 (section 4.1.5 of Pacific Lamprey Plan)	5.6.2		Plan and schedule for fish ladder diffuser gratings	Within five years of license issuance
6.5 (section 4.1.5 of Pacific Lamprey Plan)	5.6.2		Plan and schedule for fish ladder transition zones	Within five years of license issuance
6.5 (section 4.1.5 of Pacific Lamprey Plan)	5.6.2		Plan and schedule for fish ladder traps and exit pools	Within five years of license issuance



<b>Washington DOE Certification Condition Number</b>	<b>Interior Section 18 Prescription Number</b>	<b>NMFS Incidental Take Statement Term and Condition Number</b>	<b>Plan Name or Measure</b>	<b>Due Date</b>
6.6(4)			Aquatic Nuisance Species Management Plan	Within one year of detection of any new aquatic nuisance species
6.7(2)(d)		2 (section 4.1.2 of Water Quality Plan)	Annual Wells HCP Project Fish Bypass/Spill Operations Plan	Within one year of license issuance
6.7(2)(a)		2 (section 4.1.3 of Water Quality Plan)	Gas Abatement Plan	By February 28 each year following license issuance
6.7(7)(a)		2 (section 4.6.1 of Water Quality Plan)	Quality Assurance Project Plans	Within one year of license issuance
6.7(2)(e)			Water Quality Attainment Plan	Within one year of license issuance
6.7(5)(a)		2 (section 4.4.1 of Water Quality Plan)	Updated Spill Prevention Control and Countermeasures Plan	Within one year of license issuance
6.8(e)			Water Quality Protection Plan for Future Construction Activities	60 days prior to the start of construction

The licensee shall include with each plan filed with the Commission documentation that the licensee developed each plan after consultation with the National Marine Fisheries Service, Washington Department of Fish and Wildlife, Confederated Tribes of the Colville Reservation, Confederated Tribes and Bands of the Yakama Nation, U.S. Bureau of Indian Affairs, and U.S. Bureau of Land Management, and has received approval from Washington DOE, Interior, or NMFS as appropriate. 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, including any changes required by the Commission.

(b) Requirement to File Reports

Two conditions of Washington DOE's water quality certification (Appendix A) and one condition of NMFS' incidental take statement terms and conditions (Appendix D) require the licensee to file reports with other entities. These reports document compliance with requirements of this license and may have bearing on future actions. Each such report shall also be submitted to the Commission. These reports are listed in the following table:

<b>Washington DOE Certification Condition Number</b>	<b>NMFS Incidental Take Statement Term and Condition Number</b>	<b>Description</b>	<b>Due Date</b>
6.7(2)(c)(iii)	2 (sections 4.1.1, 4.1.3 of Water Quality Plan)	Total Dissolved Gas Report, including report of all spill occurring outside of the fish passage season	By February 28 each year following license issuance
6.7(3)(b)		Temperature Report	By April 30 each year following license issuance

The licensee shall submit to the Commission documentation of any consultation, and copies of any comments and recommendations made by any consulted entity in connection with each report. The Commission reserves the right to require changes to project operations or facilities based on the information contained in the report and any other available information.

(c) Requirement to File Amendment Applications

Certain water quality certification conditions in Appendix A, section 18 fishway prescriptions in Appendix C, and incidental take statement terms and conditions for bull trout in Appendix E contemplate unspecified long-term changes to project operations,

facilities, or environmental measures for the purpose of mitigating environmental impacts. These changes may not be implemented without prior Commission authorization granted after the filing of an application to amend the license. These conditions are listed below.

<b>Washington DOE Certification Condition Number</b>	<b>Interior Section 18 Prescription Number</b>	<b>FWS Incidental Take Statement Term and Condition Number</b>	<b>NMFS Incidental Take Statement Term and Condition Number</b>	<b>Description</b>
6.5 (section 4.1.2 of White Sturgeon Plan)				Alternative measures if juvenile sturgeon stocking deadlines cannot be achieved
6.5 (section 4.4 of White Sturgeon Plan)				White sturgeon adult passage measures that are consistent with measures at other mid-Columbia projects
6.5 (sections 4.2.1, 4.4, 4.5.1, 4.6.1 of Bull Trout Plan)		6, 8		Measures to address exceedances of allowable levels of bull trout incidental take
6.5 (section 4.3 of Bull Trout Plan)	4.8	5		Modifications to upstream fishways, downstream bypass, or operations to reduce impacts to bull trout passage
	4.6	10		Measures to improve bull trout passage until compliance with the bull trout passage standard is achieved
6.5 (section 4.1.1 of Pacific Lamprey Plan)				Operational modifications to upstream fishways to benefit adult Pacific lamprey

<b>Washington DOE Certification Condition Number</b>	<b>Interior Section 18 Prescription Number</b>	<b>FWS Incidental Take Statement Term and Condition Number</b>	<b>NMFS Incidental Take Statement Term and Condition Number</b>	<b>Description</b>
	5.2			Amendments to upstream fishway operating criteria
6.5 (section 4.1.3 of Pacific Lamprey Plan)	5.5			Measures for alternate upstream passage routes or counting facilities for adult Pacific lamprey
6.5 (section 4.1.5, 4.1.6, 4.1.7 of Pacific Lamprey Plan)	5.6.2, 5.7, 5.8			Measures to improve upstream Pacific lamprey passage
6.5 (section 4.2.4 of Pacific Lamprey Plan)	6.0			Measures to address impacts on Pacific lamprey populations above Wells dam, or to improve downstream lamprey passage
6.6 (section 4.3, 4.4 of Resident Fish Plan)				Measures to address changes in resident fish populations
6.5 (section 4.3 of Aquatic Nuisance Plan)				Measures to address changes in aquatic nuisance species populations

<b>Washington DOE Certification Condition Number</b>	<b>Interior Section 18 Prescription Number</b>	<b>FWS Incidental Take Statement Term and Condition Number</b>	<b>NMFS Incidental Take Statement Term and Condition Number</b>	<b>Description</b>
6.7(3)(d), 6.7(4)			2 (section 4.1.4, 4.2.3, 4.3 of Water Quality Plan)	Measures to address non-compliance with numeric water quality criteria
6.7(3)(c)(iii)			2 (section 4.2.2 of Water Quality Plan)	Measures identified through the Columbia River temperature total maximum daily load development
6.7(3)(c)(iii)			2 (section 4.2.2 of Water Quality Plan)	Reasonable and feasible measures in the event that a Columbia River temperature total maximum daily load is not timely approved by the U.S. Environmental Protection Agency
6.7(6)(b)			2 (section 4.5.2 of Water Quality Plan)	Measures to coordinate project operations with other mid-Columbia hydroelectric project operations
6.1(7)				Additional measures if Ecology determines that there is a likelihood or probability of violations of water quality standards or state law
6.4(2)				Modifications to goals, objectives, or measures included in the Aquatic Agreement's resource management plans

Article 402. Bull Trout Evaluations. Within one year of license issuance, the

licensee shall file for Commission approval, a study plan and schedule for the purpose of conducting the following:

- (a) the bull trout stranding evaluations described in section 4.4 of the Aquatic Settlement Agreement's Bull Trout Management Plan, filed May 27, 2010;
- (b) the bull trout incidental take monitoring studies described in section 4.5.1 of the Aquatic Settlement Agreement's Bull Trout Management Plan, filed May 27, 2010; and
- (c) the bull trout incidental take monitoring studies to be implemented at the Wells Hatchery as described in section 4.6.1 of the Aquatic Settlement Agreement's Bull Trout Management Plan, filed May 27, 2010.

The licensee shall include with the plan, documentation of consultation with the National Marine Fisheries Service, U.S. Fish and Wildlife Service, Washington Department of Fish and Wildlife, Washington Department of Ecology, Confederated Tribes of the Colville Reservation, Confederated Tribes and Bands of the Yakama Nation, U.S. Bureau of Indian Affairs, and U.S. Bureau of Land Management; copies of comments and recommendations on the completed plan after it has been prepared and provided to the consulted entities; and specific descriptions of how the consulted entities' comments are accommodated by the plan. The licensee shall allow a minimum of 30 days for the consulted entities to comment and to make recommendations before filing the plan with the Commission. If the licensee does not adopt a recommendation, the filing shall include the licensee's reasons based on project-specific information.

The Commission reserves the right to require changes to the plan. Implementation of the plan shall not begin until the plan is approved by the Commission. Upon Commission approval, the licensee shall implement the plan, including any changes required by the Commission.

Article 403. *Notification of Deviations from Operating Requirements.* Project operations may be temporarily modified if required by operating emergencies beyond the control of the licensee, or if necessary to protect water quality or aquatic resources at the project. If project operations are so modified, the licensee shall notify the Commission as soon as possible but no later than 48 hours after the incident.

Article 404. *Wells Hatchery Upper Columbia River Steelhead Hatchery Genetic Management Plan.* Within one year of license issuance, the licensee shall file for Commission approval, a Wells Hatchery Upper Columbia River Steelhead Hatchery Genetic Management Plan to address the effects of the Wells Hatchery steelhead program on Endangered Species listed salmon and steelhead.

The licensee shall include with the plan, documentation of consultation with the Wells HCP Coordinating Committee (as established in section 6 of the *Anadromous Fish Agreement and Habitat Conservation Plan for the Wells Hydroelectric Project, FERC License No. 2149*, dated March 26, 2002), copies of comments and recommendations on the plan after it has been prepared and provided to the consulted entities, and specific descriptions of how the consulted entities' comments are accommodated by the plan. The licensee shall allow a minimum of 30 days for the consulted entities to comment and to make recommendations before filing the plan with the Commission. If the licensee does not adopt a recommendation, the filing shall include the licensee's reasons based on project-specific information.

The Commission reserves the right to require changes to the plan. Implementation of the plan shall not begin until the plan is approved by the Commission. Upon Commission approval, the licensee shall implement the plan, including any changes required by the Commission.

Article 405. Aquatic Nuisance Species Management Plan. Within six months of license issuance, the licensee shall file for Commission approval, an Aquatic Nuisance Species Management Plan that includes the following modifications to the Aquatic Settlement Agreement's Aquatic Nuisance Species Management Plan filed May 27, 2010:

- (a) Section 4.1 of the plan must include specific best management practices that will be implemented to prevent the spread of aquatic nuisance species during construction of recreation enhancement measures; and
- (b) Section 4.2.1 of the plan must include specific reasonable and appropriate measures that are consistent with aquatic nuisance species management protocols and will be implemented, if aquatic nuisance species are detected during monitoring activities at the project.

The licensee shall include with the updated plan, documentation of consultation with the National Marine Fisheries Service, U.S. Fish and Wildlife Service, Washington Department of Fish and Wildlife, Washington Department of Ecology, Confederated Tribes of the Colville Reservation, Confederated Tribes and Bands of the Yakama Nation, U.S. Bureau of Indian Affairs, and U.S. Bureau of Land Management; copies of comments and recommendations on the updated plan after it has been prepared and provided to the consulted entities; and specific descriptions of how the consulted entities' comments are accommodated by the plan. The licensee shall allow a minimum of 30 days for the consulted entities to comment and to make recommendations before filing the plan with the Commission. If the licensee does not adopt a recommendation, the filing shall include the licensee's reasons based on project-specific information.

The Commission reserves the right to require changes to the plan. Implementation of the plan shall not begin until the plan is approved by the Commission. Upon Commission approval, the licensee shall implement the plan, including any changes required by the Commission.

Article 406. *Aquatic Settlement Agreement Annual Report.* The licensee shall annually file, by May 31 of each year following license issuance, a report that documents the results of studies and the measures completed during the previous calendar year pursuant to the May 27, 2010, Aquatic Settlement Agreement's White Sturgeon Management, Bull Trout Management, Pacific Lamprey Management, Resident Fish Management, Aquatic Nuisance Species Management, and Water Quality Management Plans as required in whole or in part by Ordering Paragraph F and Appendix C, Ordering Paragraph G and Appendix D, and Ordering Paragraph H and Appendix E.

The licensee shall include with the report, documentation of consultation with the National Marine Fisheries Service, U.S. Fish and Wildlife Service, Washington Department of Fish and Wildlife, Washington Department of Ecology, Confederated Tribes of the Colville Reservation, Confederated Tribes and Bands of the Yakama Nation, U.S. Bureau of Indian Affairs, and U.S. Bureau of Land Management; copies of comments and recommendations on the completed report after it has been prepared and provided to the consulted entities; and specific descriptions of how the consulted entities' comments are accommodated by the report. The licensee shall allow a minimum of 30 days for the consulted entities to comment and to make recommendations before filing the report with the Commission. If the licensee does not adopt a recommendation, the filing shall include the licensee's reasons based on project-specific information.

The Commission reserves the right to require changes to project operations or facilities based on information contained in the report and any other available information.

Article 407. *Reservation of Authority to Prescribe Fishways.* Authority is reserved to the Commission to require the licensee to construct, operate, and maintain or provide for the construction, operation, and maintenance of such fishways as may be prescribed by the Secretaries of Commerce or of the Interior pursuant to section 18 of the Federal Power Act.

Article 408. *Columbia River Basin Fish and Wildlife Program.* The Commission reserves the authority to order, upon its own motion or upon the recommendation of federal and state fish and wildlife agencies, affected Indian Tribes, or the Northwest Power and Conservation Council, alterations of project structures and operations to take into account to the fullest extent practicable the regional fish and wildlife program developed and amended pursuant to the Pacific Northwest Electric Power Planning and Conservation Act.



Article 409. *Wildlife and Botanical Management Plan.* The licensee shall implement the Wildlife and Botanical Management Plan filed May 27, 2010, as Appendix E-3 of Exhibit E of the final license application, with the following additions to section 4.7, *Consultation*:

The licensee shall annually file, by May 31 of each year following license issuance, a report that documents the results of the prior year's measures and the upcoming year's proposed measures implemented pursuant to the plan. The licensee shall include with the report an updated list of sensitive species, based upon an annual review of the Washington Natural Heritage Program rare plant list.

The licensee shall also include with the report documentation of consultation with the U.S. Fish and Wildlife Service, Washington Department of Fish and Wildlife, Washington Department of Ecology, the Confederated Tribes of the Colville Reservation, and U.S. Bureau of Land Management; copies of comments and recommendations on the completed report after it has been prepared and provided to the consulted entities; and specific descriptions of how the consulted entities' comments are accommodated by the report. The licensee shall allow a minimum of 30 days for the consulted entities to comment and make recommendations before filing the report with the Commission. If the licensee does not adopt a recommendation, the filing shall include the licensee's reasons based on project-specific information. The Commission reserves the right to require changes to project operations or facilities based on all available information and information included in the annual reports.

Article 410. *Programmatic Agreement and Historic Properties Management Plan.* The licensee shall implement the "Programmatic Agreement Among the Federal Energy Regulatory Commission, the Washington State Historic Preservation Officer, and the Confederated Tribes of the Colville Reservation Tribal Historic Preservation Officer for Managing Historic Properties That May be Affected by a License Issuing to Douglas County Public Utilities District for the Continued Operation of the Wells Hydroelectric Project in Okanogan County, Washington (FERC Project No. 2149)" executed on March 12, 2012, and including but not limited to the Historic Properties Management Plan (HPMP) for the project. In the event that the Programmatic Agreement is terminated, the licensee shall continue to implement the provisions of its approved HPMP. The Commission reserves the authority to require changes to the HPMP at any time during the term of the license.

Article 411. *Recreation Management Plan.* The licensee shall implement the Recreation Management Plan filed May 27, 2010, as Appendix E-5 of Exhibit E of the final license application, with the following addition to section 5.1.3, *Boat-in Tent Camping and Signage*.

Within 1 year of license issuance, the licensee shall also file, for Commission approval after consultation with the National Park Service; Washington State Parks and

Recreation Commission; Washington State Recreation and Conservation Office; Washington Department of Fish and Wildlife; Washington Department of Transportation; Washington Department of Ecology; cities of Brewster, Bridgeport, and Pateros; Port of Chelan County; Friends of Fort Okanogan; and Okanogan Historical Society; U.S. Department of the Interior; U.S. Bureau of Land Management; Okanogan and Douglas counties; the Confederated Tribes of the Colville Reservation, and U.S. Bureau of Indian Affairs, a supplement to the Recreation Management Plan included in Appendix E-5 of Exhibit E of the final license application that includes a map depicting the exact location where the proposed non-motorized campsite will be constructed. The licensee shall allow a minimum of 30 days for the consulted entities to comment and make recommendations before filing the plan with the Commission for approval.

Article 412. Project Land Use Policy. Upon license issuance, the licensee shall implement the Land Use Policy included in Appendix E-13 of Exhibit E. If changes to the Land Use Policy are proposed in the future, the licensee shall develop a revised Land Use Policy or addendum in consultation with the National Marine Fisheries Service; U.S. Fish and Wildlife Service; Washington Department of Fish and Wildlife; Washington Department of Ecology; Washington State Historic Preservation Officer (Washington SHPO), the Confederated Tribes of the Colville Reservation; the Confederated Tribes and Bands of the Yakama Nation; U.S. Bureau of Indian Affairs; U.S. Bureau of Land Management; National Park Service; Washington State Parks and Recreation Commission; Washington State Recreation and Conservation Office; Washington Department of Transportation; cities of Brewster, Bridgeport, and Pateros; Port of Chelan County; Friends of Fort Okanogan; Okanogan Historical Society; U.S. Department of the Interior; and Okanogan and Douglas counties, and file the revised Douglas PUD Land Use Policy or addendum for Commission approval. The Commission reserves the right to require changes to any revised Douglas PUD Land Use Policy or addendum. The licensee shall allow a minimum of 30 days for the consulted entities to comment and make recommendations before filing the plan with the Commission for approval

Article 413. Use and Occupancy. (a) In accordance with the provisions of this article, the licensee shall have the authority to grant permission for certain types of use and occupancy of project lands and waters and to convey certain interests in project lands and waters for certain types of use and occupancy, without prior Commission approval. The licensee may exercise the authority only if the proposed use and occupancy is consistent with the purposes of protecting and enhancing the scenic, recreational, and other environmental values of the project. For those purposes, the licensee also shall have continuing responsibility to supervise and control the use and occupancies for which it grants permission, and to monitor the use of, and ensure compliance with the covenants of the instrument of conveyance for any interests that it has conveyed under this article. If a permitted use and occupancy violates any condition of this article or any other condition imposed by the licensee for protection and enhancement of the project's scenic, recreational, or other environmental values, or if a covenant or a conveyance made under

the authority of this article is violated, the licensee shall take any lawful action necessary to correct the violation. For a permitted use or occupancy, that action includes, if necessary, canceling the permission to use and occupy the project lands and waters and requiring the removal of any non-complying structures and facilities.

(b) The types of use and occupancy of project lands and waters for which the licensee may grant permission without prior Commission approval are: (1) landscape plantings; (2) non-commercial piers, landings, boat docks, or similar structures and facilities that can accommodate no more than 10 watercraft at a time and where said facility is intended to serve single-family type dwellings; (3) embankments, bulkheads, retaining walls, or similar structures for erosion control to protect the existing shoreline; and (4) food plots and other wildlife enhancement. To the extent feasible and desirable to protect and enhance the project's scenic, recreational, and other environmental values, the licensee shall require multiple use and occupancy of facilities for access to project lands or waters. The licensee shall also ensure to the satisfaction of the Commission's authorized representative that the use and occupancies for which it grants permission are maintained in good repair and comply with applicable state and local health and safety requirements. Before granting permission for construction of bulkheads or retaining walls, the licensee shall: (1) inspect the site of the proposed construction, (2) consider whether the planting of vegetation or the use of riprap would be adequate to control erosion at the site, and (3) determine if the proposed construction is needed and would not change the basic contour of the impoundment shoreline. To implement this paragraph (b), the licensee may, among other things, establish a program for issuing permits for the specified types of use and occupancy of project lands and waters, which may be subject to the payment of a reasonable fee to cover the licensee's costs of administering the permit program. The Commission reserves the right to require the licensee to file a description of its standards, guidelines, and procedures for implementing this paragraph (b) and require modification of those standards, guidelines, or procedures.

(c) The licensee may convey easements or rights-of-way across, or leases of project lands for: (1) replacement, expansion, realignment, or maintenance of bridges or roads where all necessary state and federal approvals have been obtained; (2) storm drains and water mains; (3) sewers that do not discharge into project waters; (4) minor access roads; (5) telephone, gas, and electric utility distribution lines; (6) non-project overhead electric transmission lines that do not require erection of support structures within the project boundary; (7) submarine, overhead, or underground major telephone distribution cables or major electric distribution lines (69 kilovolt or less); and (8) water intake or pumping facilities that do not extract more than one million gallons per day from a project impoundment. No later than January 31 of each year, the licensee shall file three copies of a report briefly describing for each conveyance made under this paragraph (c) during the prior calendar year, the type of interest conveyed, the location of the lands subject to the conveyance, and the nature of the use for which the interest was conveyed. If no conveyance was made during the prior calendar year, the licensee shall so inform the Commission in writing no later than January 31 of each year.

(d) The licensee may convey fee title to, easements or rights-of-way across, or leases of project lands for: (1) construction of new bridges or roads for which all necessary state and federal approvals have been obtained; (2) sewer or effluent lines that discharge into project waters for which all necessary federal and state water quality certification or permits have been obtained; (3) other pipelines that cross project lands or waters but do not discharge into project waters; (4) non-project overhead electric transmission lines that require erection of support structures within the project boundary for which all necessary federal and state approvals have been obtained; (5) private or public marinas that can accommodate no more than 10 watercraft at a time and are located at least one-half mile (measured over project waters) from any other private or public marina; (6) recreational development consistent with an approved report on recreational resources of an Exhibit E; and (7) other uses, if: (i) the amount of land conveyed for a particular use is five acres or less; (ii) all of the land conveyed is located at least 75 feet, measured horizontally, from project waters at normal surface elevation; and (iii) no more than 50 total acres of project lands for each project development are conveyed under this clause (d)(7) in any calendar year. At least 60 days before conveying any interest in project lands under this paragraph (d), the licensee must file a letter with the Commission stating its intent to convey the interest and briefly describing the type of interest and location of the lands to be conveyed (a marked Exhibit G map may be used), the nature of the proposed use, the identity of any federal or state agency official consulted, and any federal or state approvals required for the proposed use. Unless the Commission's authorized representative, within 45 days from the filing date, requires the licensee to file an application for prior approval, the licensee may convey the intended interest at the end of that period.

(e) The following additional conditions apply to any intended conveyance under paragraph (c) or (d) of this article:

(1) before conveying the interest, the licensee shall consult with federal and state fish and wildlife or recreation agencies, as appropriate, and the Washington State Historic Preservation Officer;

(2) before conveying the interest, the licensee shall determine that the proposed use of the lands to be conveyed is not inconsistent with any approved report on recreational resources of an Exhibit E or if the project does not have an approved report on recreational resources, that the lands to be conveyed do not have recreational value;

(3) the instrument of conveyance must include the following covenants running with the land: (i) the use of the lands conveyed shall not endanger health, create a nuisance, or otherwise be incompatible with overall project recreational use; (ii) the grantee shall take all reasonable precautions to ensure that the construction, operation, and maintenance of structures or facilities on the conveyed lands will occur in a manner

that will protect the scenic, recreational, and environmental values of the project; and (iii) the grantee shall not unduly restrict public access to project waters.

(4) The Commission reserves the right to require the licensee to take reasonable remedial action to correct any violation of the terms and conditions of this article, for the protection and enhancement of the project's scenic, recreational, and other environmental values.

(f) The conveyance of an interest in project lands under this article does not in itself change the project boundaries. The project boundaries may be changed to exclude land conveyed under this article only upon approval of revised Exhibit G drawings (project boundary maps) reflecting exclusion of that land. Lands conveyed under this article will be excluded from the project only upon a determination that the lands are not necessary for project purposes, such as operation and maintenance, flowage, recreation, public access, protection of environmental resources, and shoreline control, including shoreline aesthetic values. Absent extraordinary circumstances, proposals to exclude lands conveyed under this article from the project shall be consolidated for consideration when revised Exhibit G drawings would be filed for approval for other purposes.

(g) The authority granted to the licensee under this article shall not apply to any part of the public lands and reservations of the United States included within the project boundary.

(K) The licensee shall serve copies of any Commission filing required by this order on any entity specified in the order to be consulted on matters relating to that filing. Proof of service on these entities must accompany the filing with the Commission.

(L) This order constitutes final agency action. Any party may file a request for rehearing of this order within 30 days from the date of its issuance, as provided in section 313(a) of the Federal Power Act, 16 U.S.C. § 8251 (2006), and section 385.713 of the Commission's regulations, 18 C.F.R. § 385.713 (2012). The filing of a request for rehearing does not operate as a stay of the effective date of this license or of any other date specified in this order. The licensee's failure to file a request for rehearing shall constitute acceptance of this order.

Jeff C. Wright  
Director  
Office of Energy Projects

**FORM L-5  
(October 1975)**

**FEDERAL ENERGY REGULATORY COMMISSION**

**TERMS AND CONDITIONS OF LICENSE FOR CONSTRUCTED  
MAJOR PROJECT AFFECTING NAVIGABLE WATERS  
AND LANDS OF THE UNITED STATES**

**Article 1.** The entire project, as described in this order of the Commission, shall be subject to all of the provisions, terms, and conditions of the license.

**Article 2.** No substantial change shall be made in the maps, plans, specifications, and statements described and designated as exhibits and approved by the Commission in its order as a part of the license until such change shall have been approved by the Commission: Provided, however, That if the Licensee or the Commission deems it necessary or desirable that said approved exhibits, or any of them, be changed, there shall be submitted to the Commission for approval a revised, or additional exhibit or exhibits covering the proposed changes which, upon approval by the Commission, shall become a part of the license and shall supersede, in whole or in part, such exhibit or exhibits theretofore made a part of the license as may be specified by the Commission.

**Article 3.** The project area and project works shall be in substantial conformity with the approved exhibits referred to in Article 2 herein or as changed in accordance with the provisions of said article. Except when emergency shall require for the protection of navigation, life, health, or property, there shall not be made without prior approval of the Commission any substantial alteration or addition not in conformity with the approved plans to any dam or other project works under the license or any substantial use of project lands and waters not authorized herein; and any emergency alteration, addition, or use so made shall thereafter be subject to such modification and change as the Commission may direct. Minor changes in project works, or in uses of project lands and waters, or divergence from such approved exhibits may be made if such changes will not result in a decrease in efficiency, in a material increase in cost, in an adverse environmental impact, or in impairment of the general scheme of development; but any of such minor changes made without the prior approval of the Commission, which in its judgment have produced or will produce any of such results, shall be subject to such alteration as the Commission may direct.

**Article 4.** The project, including its operation and maintenance and any work incidental to additions or alterations authorized by the Commission, whether or not conducted upon lands of the United States, shall be subject to the inspection and supervision of the Regional Engineer, Federal Energy Regulatory Commission, in the region wherein the project is located, or of such other officer or agent as the Commission may designate, who shall be the authorized representative of the

Commission for such purposes. The Licensee shall cooperate fully with said representative and shall furnish him such information as he may require concerning the operation and maintenance of the project, and any such alterations thereto, and shall notify him of the date upon which work with respect to any alteration will begin, as far in advance thereof as said representative may reasonably specify, and shall notify him promptly in writing of any suspension of work for a period of more than one week, and of its resumption and completion. The Licensee shall submit to said representative a detailed program of inspection by the Licensee that will provide for an adequate and qualified inspection force for construction of any such alterations to the project. Construction of said alterations or any feature thereof shall not be initiated until the program of inspection for the alterations or any feature thereof has been approved by said representative. The Licensee shall allow said representative and other officers or employees of the United States, showing proper credentials, free and unrestricted access to, through, and across the project lands and project works in the performance of their official duties. The Licensee shall comply with such rules and regulations of general or special applicability as the Commission may prescribe from time to time for the protection of life, health, or property.

**Article 5.** The Licensee, within five years from the date of issuance of the license, shall acquire title in fee or the right to use in perpetuity all lands, other than lands of the United States, necessary or appropriate for the construction maintenance, and operation of the project. The Licensee or its successors and assigns shall, during the period of the license, retain the possession of all project property covered by the license as issued or as later amended, including the project area, the project works, and all franchises, easements, water rights, and rights or occupancy and use; and none of such properties shall be voluntarily sold, leased, transferred, abandoned, or otherwise disposed of without the prior written approval of the Commission, except that the Licensee may lease or otherwise dispose of interests in project lands or property without specific written approval of the Commission pursuant to the then current regulations of the Commission. The provisions of this article are not intended to prevent the abandonment or the retirement from service of structures, equipment, or other project works in connection with replacements thereof when they become obsolete, inadequate, or inefficient for further service due to wear and tear; and mortgage or trust deeds or judicial sales made thereunder, or tax sales, shall not be deemed voluntary transfers within the meaning of this article.

**Article 6.** In the event the project is taken over by the United States upon the termination of the license as provided in Section 14 of the Federal Power Act, or is transferred to a new licensee or to a nonpower licensee under the provisions of Section 15 of said Act, the Licensee, its successors and assigns shall be responsible for, and shall make good any defect of title to, or of right of occupancy and use in, any of such project property that is necessary or appropriate or valuable and serviceable in the maintenance and operation of the project, and shall pay and discharge, or shall assume responsibility



for payment and discharge of, all liens or encumbrances upon the project or project property created by the Licensee or created or incurred after the issuance of the license: Provided, That the provisions of this article are not intended to require the Licensee, for the purpose of transferring the project to the United States or to a new licensee, to acquire any different title to, or right of occupancy and use in, any of such project property than was necessary to acquire for its own purposes as the Licensee.

**Article 7.** The actual legitimate original cost of the project, and of any addition thereto or betterment thereof, shall be determined by the Commission in accordance with the Federal Power Act and the Commission's Rules and Regulations thereunder.

**Article 8.** The Licensee shall install and thereafter maintain gages and stream-gaging stations for the purpose of determining the stage and flow of the stream or streams on which the project is located, the amount of water held in and withdrawn from storage, and the effective head on the turbines; shall provide for the required reading of such gages and for the adequate rating of such stations; and shall install and maintain standard meters adequate for the determination of the amount of electric energy generated by the project works. The number, character, and location of gages, meters, or other measuring devices, and the method of operation thereof, shall at all times be satisfactory to the Commission or its authorized representative. The Commission reserves the right, after notice and opportunity for hearing, to require such alterations in the number, character, and location of gages, meters, or other measuring devices, and the method of operation thereof, as are necessary to secure adequate determinations. The installation of gages, the rating of said stream or streams, and the determination of the flow thereof, shall be under the supervision of, or in cooperation with, the District Engineer of the United States Geological Survey having charge of stream-gaging operations in the region of the project, and the Licensee shall advance to the United States Geological Survey the amount of funds estimated to be necessary for such supervision, or cooperation for such periods as may mutually agreed upon. The Licensee shall keep accurate and sufficient records of the foregoing determinations to the satisfaction of the Commission, and shall make return of such records annually at such time and in such form as the Commission may prescribe.

**Article 9.** The Licensee shall, after notice and opportunity for hearing, install additional capacity or make other changes in the project as directed by the Commission, to the extent that it is economically sound and in the public interest to do so.

**Article 10.** The Licensee shall, after notice and opportunity for hearing, coordinate the operation of the project, electrically and hydraulically, with such other projects or power systems and in such manner as the Commission may direct in the interest of power and other beneficial public uses of water resources, and on such conditions concerning the equitable sharing of benefits by the Licensee as the Commission may order.

**Article 11.** Whenever the Licensee is directly benefited by the construction work of another licensee, a permittee, or the United States on a storage reservoir or other headwater improvement, the Licensee shall reimburse the owner of the headwater improvement for such part of the annual charges for interest, maintenance, and depreciation thereof as the Commission shall determine to be equitable, and shall pay to the United States the cost of making such determination as fixed by the Commission. For benefits provided by a storage reservoir or other headwater improvement of the United States, the Licensee shall pay to the Commission the amounts for which it is billed from time to time for such headwater benefits and for the cost of making the determinations pursuant to the then current regulations of the Commission under the Federal Power Act.

**Article 12.** The United States specifically retains and safeguards the right to use water in such amount, to be determined by the Secretary of the Army, as may be necessary for the purposes of navigation on the navigable waterway affected; and the operations of the Licensee, so far as they affect the use, storage and discharge from storage of waters affected by the license, shall at all times be controlled by such reasonable rules and regulations as the Secretary of the Army may prescribe in the interest of navigation, and as the Commission may prescribe for the protection of life, health, and property, and in the interest of the fullest practicable conservation and utilization of such waters for power purposes and for other beneficial public uses, including recreational purposes, and the Licensee shall release water from the project reservoir at such rate in cubic feet per second, or such volume in acre-feet per specified period of time, as the Secretary of the Army may prescribe in the interest of navigation, or as the Commission may prescribe for the other purposes hereinbefore mentioned.

**Article 13.** On the application of any person, association, corporation, Federal agency, State or municipality, the Licensee shall permit such reasonable use of its reservoir or other project properties, including works, lands and water rights, or parts thereof, as may be ordered by the Commission, after notice and opportunity for hearing, in the interests of comprehensive development of the waterway or waterways involved and the conservation and utilization of the water resources of the region for water supply or for the purposes of steam-electric, irrigation, industrial, municipal or similar uses. The Licensee shall receive reasonable compensation for use of its reservoir or other project properties or parts thereof for such purposes, to include at least full reimbursement for any damages or expenses which the joint use causes the Licensee to incur. Any such compensation shall be fixed by the Commission either by approval of an agreement between the Licensee and the party or parties benefiting or after notice and opportunity for hearing. Applications shall contain information in sufficient detail to afford a full understanding of the proposed use, including satisfactory evidence that the applicant possesses necessary water rights pursuant to applicable State law, or a showing of cause why such evidence cannot concurrently be submitted, and a statement as to the relationship of the proposed use to any State or municipal plans or orders which may have been adopted with respect to the use of such waters.

**Article 14.** In the construction or maintenance of the project works, the Licensee shall place and maintain suitable structures and devices to reduce to a reasonable degree the liability of contact between its transmission lines and telegraph, telephone and other signal wires or power transmission lines constructed prior to its transmission lines and not owned by the Licensee, and shall also place and maintain suitable structures and devices to reduce to a reasonable degree the liability of any structures or wires falling or obstructing traffic or endangering life. None of the provisions of this article are intended to relieve the Licensee from any responsibility or requirement which may be imposed by any other lawful authority for avoiding or eliminating inductive interference.

**Article 15.** The Licensee shall, for the conservation and development of fish and wildlife resources, construct, maintain, and operate, or arrange for the construction, maintenance, and operation of such reasonable facilities, and comply with such reasonable modifications of the project structures and operation, as may be ordered by the Commission upon its own motion or upon the recommendation of the Secretary of the Interior or the fish and wildlife agency or agencies of any State in which the project or a part thereof is located, after notice and opportunity for hearing.

**Article 16.** Whenever the United States shall desire, in connection with the project, to construct fish and wildlife facilities or to improve the existing fish and wildlife facilities at its own expense, the Licensee shall permit the United States or its designated agency to use, free of cost, such of the Licensee's lands and interests in lands, reservoirs, waterways and project works as may be reasonably required to complete such facilities or such improvements thereof. In addition, after notice and opportunity for hearing, the Licensee shall modify the project operation as may be reasonably prescribed by the Commission in order to permit the maintenance and operation of the fish and wildlife facilities constructed or improved by the United States under the provisions of this article. This article shall not be interpreted to place any obligation on the United States to construct or improve fish and wildlife facilities or to relieve the Licensee of any obligation under this license.

**Article 17.** The Licensee shall construct, maintain, and operate, or shall arrange for the construction, maintenance, and operation of such reasonable recreational facilities, including modifications thereto, such as access roads, wharves, launching ramps, beaches, picnic and camping areas, sanitary facilities, and utilities, giving consideration to the needs of the physically handicapped, and shall comply with such reasonable modifications of the project, as may be prescribed hereafter by the Commission during the term of this license upon its own motion or upon the recommendation of the Secretary of the Interior or other interested Federal or State agencies, after notice and opportunity for hearing.

**Article 18.** So far as is consistent with proper operation of the project, the Licensee shall allow the public free access, to a reasonable extent, to project waters and

adjacent project lands owned by the Licensee for the purpose of full public utilization of such lands and waters for navigation and for outdoor recreational purposes, including fishing and hunting: Provided, That the Licensee may reserve from public access such portions of the project waters, adjacent lands, and project facilities as may be necessary for the protection of life, health, and property.

**Article 19.** In the construction, maintenance, or operation of the project, the Licensee shall be responsible for, and shall take reasonable measures to prevent, soil erosion on lands adjacent to streams or other waters, stream sedimentation, and any form of water or air pollution. The Commission, upon request or upon its own motion, may order the Licensee to take such measures as the Commission finds to be necessary for these purposes, after notice and opportunity for hearing.

**Article 20.** The Licensee shall clear and keep clear to an adequate width lands along open conduits and shall dispose of all temporary structures, unused timber, brush, refuse, or other material unnecessary for the purposes of the project which results from the clearing of lands or from the maintenance or alteration of the project works. In addition, all trees along the periphery of project reservoirs which may die during operations of the project shall be removed. All clearing of the lands and disposal of the unnecessary material shall be done with due diligence and to the satisfaction of the authorized representative of the Commission and in accordance with appropriate Federal, State, and local statutes and regulations.

**Article 21.** Material may be dredged or excavated from, or placed as fill in, project lands and/or waters only in the prosecution of work specifically authorized under the license; in the maintenance of the project; or after obtaining Commission approval, as appropriate. Any such material shall be removed and/or deposited in such manner as to reasonably preserve the environmental values of the project and so as not to interfere with traffic on land or water. Dredging and filling in a navigable water of the United States shall also be done to the satisfaction of the District Engineer, Department of the Army, in charge of the locality.

**Article 22.** Whenever the United States shall desire to construct, complete, or improve navigation facilities in connection with the project, the Licensee shall convey to the United States, free of cost, such of its lands and rights-of-way and such rights of passage through its dams or other structures, and shall permit such control of its pools, as may be required to complete and maintain such navigation facilities.

**Article 23.** The operation of any navigation facilities which may be constructed as a part of, or in connection with, any dam or diversion structure constituting a part of the project works shall at all times be controlled by such reasonable rules and regulations in the interest of navigation, including control of the level of the pool caused by such dam or diversion structure, as may be made from time to time by the Secretary of the Army.

**Article 24.** The Licensee shall furnish power free of cost to the United States for the operation and maintenance of navigation facilities in the vicinity of the project at the voltage and frequency required by such facilities and at a point adjacent thereto, whether said facilities are constructed by the Licensee or by the United States.

**Article 25.** The Licensee shall construct, maintain, and operate at its own expense such lights and other signals for the protection of navigation as may be directed by the Secretary of the Department in which the Coast Guard is operating.

**Article 26.** Timber on lands of the United States cut, used, or destroyed in the construction and maintenance of the project works, or in the clearing of said lands, shall be paid for, and the resulting slash and debris disposed of, in accordance with the requirements of the agency of the United States having jurisdiction over said lands. Payment for merchantable timber shall be at current stumpage rates, and payment for young growth timber below merchantable size shall be at current damage appraisal values. However, the agency of the United States having jurisdiction may sell or dispose of the merchantable timber to others than the Licensee: Provided, That timber so sold or disposed of shall be cut and removed from the area prior to, or without undue interference with, clearing operations of the Licensee and in coordination with the Licensee's project construction schedules. Such sale or disposal to others shall not relieve the Licensee of responsibility for the clearing and disposal of all slash and debris from project lands.

**Article 27.** The Licensee shall do everything reasonably within its power, and shall require its employees, contractors, and employees of contractors to do everything reasonably within their power, both independently and upon the request of officers of the agency concerned, to prevent, to make advance preparations for suppression of, and to suppress fires on the lands to be occupied or used under the license. The Licensee shall be liable for and shall pay the costs incurred by the United States in suppressing fires caused from the construction, operation, or maintenance of the project works or of the works appurtenant or accessory thereto under the license.

**Article 28.** The Licensee shall interpose no objection to, and shall in no way prevent, the use by the agency of the United States having jurisdiction over the lands of the United States affected, or by persons or corporations occupying lands of the United States under permit, of water for fire suppression from any stream, conduit, or body of water, natural or artificial, used by the Licensee in the operation of the project works covered by the license, or the use by said parties of water for sanitary and domestic purposes from any stream, conduit, or body of water, natural or artificial, used by the Licensee in the operation of the project works covered by the license.

**Article 29.** The Licensee shall be liable for injury to, or destruction of, any buildings, bridges, roads, trails, lands, or other property of the United States, occasioned by the construction, maintenance, or operation of the project works or of the works

appurtenant or accessory thereto under the license. Arrangements to meet such liability, either by compensation for such injury or destruction, or by reconstruction or repair of damaged property, or otherwise, shall be made with the appropriate department or agency of the United States.

**Article 30.** The Licensee shall allow any agency of the United States, without charge, to construct or permit to be constructed on, through, and across those project lands which are lands of the United States such conduits, chutes, ditches, railroads, roads, trails, telephone and power lines, and other routes or means of transportation and communication as are not inconsistent with the enjoyment of said lands by the Licensee for the purposes of the license. This license shall not be construed as conferring upon the Licensee any right of use, occupancy, or enjoyment of the lands of the United States other than for the construction, operation, and maintenance of the project as stated in the license.

**Article 31.** In the construction and maintenance of the project, the location and standards of roads and trails on lands of the United States and other uses of lands of the United States, including the location and condition of quarries, borrow pits, and spoil disposal areas, shall be subject to the approval of the department or agency of the United States having supervision over the lands involved.

**Article 32.** The Licensee shall make provision, or shall bear the reasonable cost, as determined by the agency of the United States affected, of making provision for avoiding inductive interference between any project transmission line or other project facility constructed, operated, or maintained under the license, and any radio installation, telephone line, or other communication facility installed or constructed before or after construction of such project transmission line or other project facility and owned, operated, or used by such agency of the United States in administering the lands under its jurisdiction.

**Article 33.** The Licensee shall make use of the Commission's guidelines and other recognized guidelines for treatment of transmission line rights-of-way, and shall clear such portions of transmission line rights-of-way across lands of the United States as are designated by the officer of the United States in charge of the lands; shall keep the areas so designated clear of new growth, all refuse, and inflammable material to the satisfaction of such officer; shall trim all branches of trees in contact with or liable to contact the transmission lines; shall cut and remove all dead or leaning trees which might fall in contact with the transmission lines; and shall take such other precautions against fire as may be required by such officer. No fires for the burning of waste material shall be set except with the prior written consent of the officer of the United States in charge of the lands as to time and place.

**Article 34.** The Licensee shall cooperate with the United States in the disposal by

the United States, under the Act of July 31, 1947, 61 Stat. 681, as amended (30 U.S.C. sec. 601, et seq.), of mineral and vegetative materials from lands of the United States occupied by the project or any part thereof: Provided, That such disposal has been authorized by the Commission and that it does not unreasonably interfere with the occupancy of such lands by the Licensee for the purposes of the license: Provided further, That in the event of disagreement, any question of unreasonable interference shall be determined by the Commission after notice and opportunity for hearing.

**Article 35.** If the Licensee shall cause or suffer essential project property to be removed or destroyed or to become unfit for use, without adequate replacement, or shall abandon or discontinue good faith operation of the project or refuse or neglect to comply with the terms of the license and the lawful orders of the Commission mailed to the record address of the Licensee or its agent, the Commission will deem it to be the intent of the Licensee to surrender the license. The Commission, after notice and opportunity for hearing, may require the Licensee to remove any or all structures, equipment and power lines within the project boundary and to take any such other action necessary to restore the project waters, lands, and facilities remaining within the project boundary to a condition satisfactory to the United States agency having jurisdiction over its lands or the Commission's authorized representative, as appropriate, or to provide for the continued operation and maintenance of nonpower facilities and fulfill such other obligations under the license as the Commission may prescribe. In addition, the Commission in its discretion, after notice and opportunity for hearing, may also agree to the surrender of the license when the Commission, for the reasons recited herein, deems it to be the intent of the Licensee to surrender the license.

**Article 36.** The right of the Licensee and of its successors and assigns to use or occupy waters over which the United States has jurisdiction, or lands of the United States under the license, for the purpose of maintaining the project works or otherwise, shall absolutely cease at the end of the license period, unless the Licensee has obtained a new license pursuant to the then existing laws and regulations, or an annual license under the terms and conditions of this license.

**Article 37.** The terms and conditions expressly set forth in the license shall not be construed as impairing any terms and conditions of the Federal Power Act which are not expressly set forth herein.

## APPENDIX A

### **WATER QUALITY CERTIFICATE CONDITIONS FOR THE WELLS HYDROELECTRIC PROJECT NO. 2149 ISSUED BY WASHINGTON DEPARTMENT OF ECOLOGY, ORDER NO. 8981, FEBRUARY 27, 2012**

#### **6.0 Water Quality Certification Conditions**

In view of the foregoing and in accordance with Section 401 of the Clean Water Act (33 USC 1341), RCW 90.48.260 and Chapter 173-201A, Ecology finds reasonable assurance that the operation of the Wells Project pursuant to the proposed new license will comply with state and federal water quality standards and other appropriate requirements of state law provided the following conditions are met. Implementation of the measures, the compliance schedule and adaptive management strategy contained in this Order will result in the attainment and compliance with state and federal water quality standards and other appropriate requirements of state law provided the following conditions are met. Accordingly, through this Order issued and enforceable under RCW 90.48, Ecology grants Section 401 Water Quality Certification to the Licensee, Douglas County Public Utility District No. 1 for the Wells hydroelectric project, (FERC No. 2149) subject to the following conditions. This Order will hereafter be referred to as the "Certification".

#### **6.1 General Conditions**

The Project shall comply with all water quality standards (currently codified in WAC 173-201A), ground water standards (currently codified in WAC 173-200), and sediment quality standards (currently codified in WAC 173-204) and other appropriate requirements of state law that are related to compliance with such standards.

- 1) In the event of changes in or amendments to the state water quality, ground water, or sediment standards changes in or amendments to the state Water Pollution Control Act (RCW 90.48) or changes in or amendments to the Federal Clean Water Act, such provisions, standards, criteria or requirements shall apply to the Project and any attendant agreements, orders, permits, to the fullest extent permitted by law.
- 2) Discharge of any solid or liquid waste to the waters of the State of Washington without prior approval from Ecology is prohibited.
- 3) Douglas PUD shall consult with Ecology before it undertakes any change to the Project or Project operations that might significantly and adversely affect compliance with any applicable water quality standard (including designated uses) or other appropriate requirement of state law. If, following such consultation, Ecology determines that such change would violate state water



quality standards or other appropriate requirements of state law, Ecology reserves the right to condition or deny such Project change. Ecology will operate in accordance with the dispute resolution process contained in the ASA [Aquatic Settlement Agreement], provided such agreement still exists and Ecology is still a party to the agreement.

- 4) This Certification does not exempt compliance with other statutes and codes administered by federal, state and local agencies.
- 5) Ecology will administer this Certification consistent with the ASA, provided such agreement still exists and Ecology is still a party to the agreement. Any provisions of this Certification that incorporate the substantive obligations of the ASA shall continue to apply even if the ASA ceases to exist, or if FERC fails to fully incorporate any provisions of the ASA in the Project license, unless otherwise ordered by Ecology. However, if a conflict or inconsistency exists or arises between this Certification and the ASA or any part thereof that is incorporated in this Certification, the terms of this Certification shall govern, unless Ecology directs otherwise.
- 6) Ecology retains the right to modify schedules and deadlines provided under this Certification or provisions of the Management Plans that it incorporates.
- 7) Ecology retains the right to require additional monitoring, studies, or measures if it determines that there is a likelihood or probability that violations of water quality standards or other appropriate requirements of state law have or may occur, or insufficient information exists to make such a determination.
- 8) Ecology reserves the right to amend this Certification by Administrative Order if it determines that the provisions hereof are no longer adequate to provide reasonable assurance of compliance with applicable water quality standards or other appropriate requirements of state law. Such determination shall be based upon provisions in the new FERC license or new information or changes in: (i) the construction or operation of the Project; (ii) characteristics of the water; (iii) water quality criteria or standards; (iv) Total Maximum Daily Load (TMDL) requirements; (v) effluent limitations; or (vi) other applicable requirement of state law. Amendments of this Certification shall take effect immediately upon issuance, unless otherwise provided in the order.
- 9) Ecology reserves the right to issue administrative orders, assess or seek penalties under state or federal law, and to initiate legal actions in any court or forum of competent jurisdiction for the purposes of enforcing the requirements of this Certification or applicable state or federal laws.

- 10) The conditions of this Certification should not be construed to prevent or prohibit Douglas PUD from either voluntarily or in response to legal requirements imposed by a court, the FERC, or any other body with competent jurisdiction, taking actions which will provide a greater level of protection, mitigation or enhancement of water quality or of existing or designated uses.
- 11) If five or more years elapse between the date that this Certification is issued and the date of issuance of the New License for the Project, this Certification shall be deemed to have been denied at such time and Douglas PUD shall send Ecology an updated 401 application that reflects then current conditions, regulations and technologies. This provision should not be construed to otherwise limit the reserved authority of Ecology to deny, amend or correct the Certification before or after the issuance of the New License.
- 12) All documents required under this Certification to be submitted to Ecology shall be submitted to Washington State Department of Ecology, Central Regional Office, Water Quality Program, Section Manager.
- 13) Copies of this Certification and associated permits, licenses, approvals and other documents shall be kept on site and made readily available for reference by Douglas PUD, its contractors and consultants, and by Ecology.
- 14) Douglas PUD shall allow Ecology access to inspect the Project and Project records required by this Certification for the purpose of monitoring compliance with the conditions of this Certification. Access will occur after reasonable notice, except in emergency circumstances.
- 15) Douglas PUD shall, upon request by Ecology, fully respond to all reasonable requests for materials to assist Ecology in making determinations under this Certification and any resulting rulemaking or other process.
- 16) If an action required under or pursuant to this Certification requires as a matter of federal law that the FERC approve the action before it may be undertaken, Douglas PUD shall not be considered in violation of such requirements to the extent that FERC refuses to provide such approval, provided that Douglas PUD diligently seeks such approval and so notifies Ecology.
- 17) The reservations contained in this Certification do not preclude or limit any right of Douglas PUD to contest the validity of any such reservation in connection with any order or any other action taken by Ecology pursuant to such reservation.

- 18) All information prepared or collected as a requirement of this Certification (e.g., plans, reports, monitoring results, meeting minutes, and data) shall be made available to the public on Douglas PUD's website or by another readily accessible means. Where data or quantitative analysis is involved, it shall be provided in a format that allows others to efficiently validate and analyze data and results.
- 19) Where this certification refers to "reasonable and feasible" actions or measures, Ecology retains the authority to ultimately determine if an action or measure qualifies as "reasonable and feasible."
- 20) Per RCW 90.48.422(3), Douglas PUD shall be required to mitigate or remedy a water quality violation or problem only to the extent that there is substantial evidence the project has caused such violation or problem.
- 21) All conditions in this Certification apply for the life of the license and any subsequent annual licenses that may be required, unless explicitly stated otherwise in this Certification or modified by a subsequent order by Ecology.

## **6.2 Aquatic Settlement Agreement**

Douglas PUD shall operate the Project in compliance with the ASA, including the six Aquatic Resource Management Plans and their respective Goals and Objectives and Protection, Mitigation and Enhancement Measures (PMEs).

Ecology expects that the measures and processes required in this Certification will protect aquatic life as required under state law and the Clean Water Act. In the event that the ASA, or any Aquatic Resource Management Plan fails, or Ecology determines there is substantial likelihood of failure, to adequately protect, in a timely manner, existing or designated uses of water quality, Ecology reserves the right to require such changes including, but not limited to, Goals and Objectives, PMEs, or any operation or physical structures, as it determines necessary to protect these uses or water quality. In taking such actions, Ecology will operate in accordance with the dispute resolution process contained in the ASA, provided such agreement still exists and Ecology is still a party to the agreement.

For purposes of this Certification, the Goals and Objectives represent important steps toward meeting the designated uses of a water body. They serve as quantifiable goals for moving toward attaining full support of designated uses. They are not intended to serve as a surrogate for the requirement to support and protect designated uses of the waters.

Ecology reserves the right to modify the processes or decisions described herein, including timeframes. If timely progress is not made or plans or reports are not timely submitted, Ecology reserves the right to impose penalties.

## **1) Aquatic Settlement Work Group**

The ASA requires the PUD to convene an Aquatic Settlement Work Group (ASWG) that is composed of representatives of each party to the ASA. The purpose of the ASWG is to be the primary forum for consultation and coordination among the PUD and federal, state and tribal parties in connection with implementing the ASA and its six aquatic resource management plans. Douglas PUD shall provide for the meeting space, a facilitator, etc., as described in the ASA. If consensus cannot be reached in accordance with the procedures in the ASA, or if decisions of the ASWG conflict with this Certification or state law, or if the ASWG ceases to exist, decisions shall be made by or be subject to approval by Ecology.

## **2) Adaptive Management**

This Certification requires the use of an Adaptive Management process where necessary to meet State water quality standards through the term of the License. As used in this Certification, Adaptive Management means an iterative and rigorous process used to achieve the goals and objectives. It is intended to improve the management of aquatic resources affected by the Project in order to achieve the Goals and Objectives of the Aquatic Resource Management Plans and water quality standards as effectively and efficiently as possible.

Ecology expects the adaptive management processes contained in this Certification and in the Aquatic Resource Management Plans will be adequate to protect aquatic life as required under state law and the Clean Water Act. It is possible that during the course of the new operating license, there may be instances where the measures found in individual management plans may need to be modified. In those instances, "adaptive management" will be used to achieve the Goals and Objectives.

For purposes of this Certification, Adaptive Management involves the following steps:

- a) Develop initial (or, in subsequent rounds, update) hypotheses regarding any potential Project impacts and potential protection or mitigation measures;
- b) Complete studies to determine whether the hypothesized impacts are valid, and if valid, quantify the impact resulting from the Project;
- c) If the hypothesized impact is validated and quantified, then the ASWG shall identify (or, in subsequent rounds, update) appropriate goals and objectives and implementing measures;
- d) Develop and implement reasonable and appropriate measures to avoid,

minimize or mitigate the identified Project impacts in accordance with an established schedule;

- e) Develop and implement monitoring and evaluation methodologies for determining whether the Goals and Objectives have been achieved;
- f) Should the measures be successful at mitigating or minimizing Project impact(s), then periodic monitoring shall take place to confirm that such Goals and Objectives continue to be achieved;
- g) Should the implemented measures fail to achieved the Goals and Objectives over a reasonable time frame, then Douglas PUD shall develop and the ASWG shall evaluate additional or revised measures, including those previously considered in the six Aquatic Resource Management Plans, and Douglas PUD shall implement any additional or revised appropriate and reasonable measures, or explain why such Goals and Objectives cannot be achieved;
- h) If such Goals and Objectives have not been achieved over a reasonable time frame, then the ASWG may reevaluate and revise such Goals and Objectives.

Parts of steps (a) through (e) have already been developed as part of the Relicensing process and are included in the six Aquatic Resource Management Plans. The reference Goals and Objectives are identified in Section 3 of the Aquatic Resource Management Plans (Plans). The implementation measures are contained in Section 4 of the Plans. These Goals and Objectives and implementation measures are incorporated as part of this Certification and shall be implemented by Douglas PUD. The remaining steps shall be implemented through the course of the License, in accordance with the Plans or as determined by the ASWG and Ecology.

### **6.3 Anadromous Salmonids**

Douglas PUD shall meet the requirements of the Wells HCP in order to protect the Plan species (spring and summer/fall Chinook, steelhead, sockeye and Coho). This involves collaboration by Douglas PUD with the responsible agencies and tribes through the Wells HCP and with members of the ASWG. However, in the event of a perceived conflict between the HCP and this Certification, it is presumed that the responsible agencies, including Ecology, shall work together to obtain a solution that best meets the needs of all species involved, in accordance with the requirements of the Clean Water Act and the Endangered Species Act.

#### **6.4 Aquatic Resource Management Plans - General Requirements**

- 1) Douglas PUD shall implement the Goals and Objectives as identified in Section 3 of each Plan, and all of the protection, mitigation, and enhancement measures (PMEs) that are contained in Section 4 of each Plan.
- 2) Each Plan includes an implementation schedule that was based on the best information available at the time the Plan was developed. As new information becomes available, the Goals and Objectives and PMEs may be adjusted through consultation with the ASWG, in accordance with Section 6.2 of this Certification.
- 3) Douglas PUD shall maintain current versions of the Plans on the PUD's website and they shall be made available to the public.
- 4) Douglas PUD shall provide a draft annual report to the ASWG summarizing the previous year's activities undertaken in accordance with each Plan. The report shall document all activities conducted within the Project and describe activities proposed for the following year. Furthermore, any decisions, statements of agreement, evaluations, or changes made pursuant to each plan will be included in the annual report. If significant activity was not conducted in a given year, Douglas PUD shall prepare a memorandum providing an explanation of the circumstances in lieu of the annual report.
- 5) The final report is subject to approval by Ecology for purposes of compliance with federal and state water quality standards, including designated uses.

#### **6.5 Bull Trout, White Sturgeon, Pacific Lamprey and Resident Fish**

Douglas PUD shall implement Section 3 (Goals and Objectives) and Section 4 (PMEs) of the White Sturgeon, Bull Trout, Pacific Lamprey and Resident Fish Aquatic Resource Management Plans. Sections 3 and 4 of each of these Plans are attached hereto as Appendices A through D, respectively, and are hereby incorporated into this Certification.

#### **6.6 Aquatic Nuisance Species (ANS)**

Douglas PUD shall implement Sections 3 and 4 of the Aquatic Nuisance Species Plan. Sections 3 and 4 of this Plan are attached hereto as Appendix E and are hereby incorporated into this Certification. Additional requirements follow below:

- 1) **Additional Monitoring Requirements.** In addition to monitoring for zebra and quagga mussels, Douglas PUD shall monitor for the presence of aquatic nuisance plants (e.g., Eurasian milfoil) at public boat launches and non-native crayfish at appropriate locations within the Project area. Douglas PUD shall

monitor and report the presence of such nuisance plants and crayfish in coordination with the ASWG.

- 2) **Education.** To increase boater awareness of the dangers of spreading ANS and to educate the public regarding the methods to decrease the spread of ANS (e.g., clean the weeds off the boat and drain the live well before going to a new waterbody), Douglas PUD shall provide signage and other educational materials (e.g., pamphlets) at all boat launches, for owners of both motorized and non-motorized boats. The educational message shall be coordinated with the ASWG. Douglas PUD shall provide the pamphlets during peak boating season (May 1 – October 30) of each year. Signage shall be provided year-round.
- 3) **Reporting.** In the annual report required under section 4 of the Aquatic Nuisance Species Plan, Douglas PUD shall include information about any pending ANS problems;
- 4) **Plan.** If any new ANS are detected at levels of concern to the ASWG, and the ASWG agrees that the existence or operation of the Wells Project contributes to the introduction, spread or proliferation of the ANS, within one year following detection (and after the New License is issued), in consultation with the ASWG, Douglas PUD shall develop and begin implementation of an ANS Control and Prevention Plan (Prevention Plan) to monitor and manage invasive species within the Project boundary. The Plan shall focus on prevention by addressing the pathways for invasion of aquatic invasive flora and fauna.

## **6.7 Water Quality Management Plan**

Douglas PUD shall implement sections 3 and 4 of the Water Quality Management Plan (WQMP), as modified below:

### **1) Goal and Objectives**

Douglas PUD shall implement the following Goals and Objectives:

The Goal of the WQMP is to protect the quality of the surface waters affected by the Project and to ensure that Washington's water quality standards (WQS) are met.

Objective 1: Ensure that compliance with state WQS for TDG is achieved. Compliance is to be achieved within ten years of the issuance of the New License. Measures are specified to address non-attainment of standards after this time period.

Objective 2: Maintain compliance with state WQS for water temperature. If information becomes available that suggests non-compliance is occurring or likely to occur, the ASWG will identify reasonable and feasible measures, which shall be implemented by Douglas PUD;

Objective 3: Maintain compliance with state WQS for other numeric criteria. If information becomes available that suggests non-compliance is occurring or likely to occur, the ASWG will identify reasonable and feasible measures, which shall be implemented by Douglas PUD;

Objective 4: Operate the Project in a manner that will avoid, or where not feasible to avoid, minimize, spill of hazardous materials and implement effective countermeasures in the event of a hazardous materials spill; and

Objective 5: Participate in regional forums tasked with improving water quality conditions and protecting designated uses in the Columbia River basin.

## **2) Total Dissolved Gas (Objective 1)**

This water quality parameter (TDG) requires a Water Quality Attainment Plan, per Section 3.0(5) above and as described in further detail in the section on Compliance, below.

Douglas PUD, in consultation with the ASWG, shall implement the following measures.

### **a) Gas Abatement Plan and TDG Exemption**

Pursuant to WAC 173-201A-200(1)(f)(ii), and as described in Section 3.0(3) of this Certification, the TDG criteria for the Project can be adjusted to aid fish passage when the Project is operated with an approved Gas Abatement Plan (GAP).

- i) Douglas PUD shall operate the Project in compliance with the GAP approved by Ecology. By February 28 of each year, Douglas PUD shall submit a GAP to Ecology for approval. Pending Ecology's approval of each subsequent GAP Douglas PUD shall continue to implement the activities identified within the previously approved plan. Douglas PUD shall submit the GAPs annually through the term of the new license unless Ecology approves a less frequent schedule or until a GAP is no longer required by Ecology.
- ii) The GAP will include the Spill Operations Plan and will be accompanied by a fisheries management plan and physical and



biological monitoring plans. The GAP shall include information on any new or improved technologies to aid in the reduction in TDG.

- iii) It is anticipated that: (1) the TDG monitoring activities described below will be adequate for the physical monitoring plan requirement; and (2) the Wells HCP and Aquatic Resource Management Plans in the ASA will be adequate for fish management plans, However, additional biological monitoring studies (e.g., Gas Bubble Trauma Monitoring) may be required.

b) Non-Fish Spill Season

Commencing one year after issuance of the new license, Douglas PUD shall monitor and report spills and TDG during non-fish spill season to determine TDG compliance with the 110% standard.

c) Monitoring and Reports

- i) Douglas PUD shall maintain a TDG monitoring program at its Fixed Monitoring Station (FMS) locations in the forebay and tailrace of Wells Dam and/or at other locations as determined by Ecology, in order to monitor TDG and barometric pressure. Douglas PUD shall monitor TDG (and barometric pressure, as needed) hourly throughout the year. Data from the Wells forebay and tailrace stations shall be transmitted on a daily basis to a web-accessible database available for use by Ecology and regional fish management agencies. Douglas PUD shall maintain this monitoring program consistent with activities described in the GAP.
- ii) The TDG monitoring program shall conform to the Ecology Quality Assurance Project Plan (QAPP) requirements per Section 6.7(f) of this Order and the procedures shall be at least as stringent as the quality assurance/quality control (QA/QC) calibration and monitoring procedures and protocols developed by the United States Geological Service (USGS) monitoring methodology for the Columbia River.
- iii) By February 28<sup>th</sup> of each year, unless otherwise provided for in writing by Ecology, Douglas PUD shall provide an annual TDG report for Ecology's review and approval. The report shall include the results of all activities required by the GAP. In addition, the report shall describe all spills and associated TDG levels in the tailrace occurring outside the fish passage season.

d) Spill Operations

Within one year of issuance of the new license, Douglas PUD shall coordinate the annual HCP Project Fish Bypass/Spill Operations Plan with the GAP, using best available information to minimize the production of TDG during periods of spill. In consultation with the Wells HCP Coordinating Committee and ASWG, the spill operations plan will be reviewed and updated, as necessary.

e) Compliance Schedule.

Within one year of license issuance, Douglas PUD shall submit a Water Quality Attainment Plan (WQAP) for Ecology's review and approval. The WQAP shall include a compliance schedule to ensure compliance with water quality criteria within 10 years. The WQAP also allows time for the completion of the necessary studies or for the resolution of the issue of elevated incoming TDG through rule-making or other means. The WQAP shall be prepared in consultation with the ASWG and the HCP Coordinating Committee, and shall meet the requirements of WAC 173-201A-510(5). The WQAP shall:

- i) Identify all reasonable and feasible improvements that could be used to meet TDG standards. Data on high TDG levels and flow coming into the Wells forebay and its effects on Project compliance shall be included;
- ii) Contain the analytical methods that will be used to evaluate all reasonable and feasible improvements;
- iii) Provide for any supplemental monitoring that is necessary to track compliance with the numeric WQS; and
- iv) Include benchmarks and reporting sufficient for Ecology to track Douglas PUD's progress toward implementing this plan and achieving compliance within ten years of Ecology's approval of the plan.
- v) The report of the study of reasonable and feasible improvements is due within one year of approval of the WQAP and should include the ASWG and Douglas PUD's recommendations for measures to be implemented. The report is subject to Ecology review and approval.

- f) Measures to Address Non-Attainment of Standards
  - i) Post compliance schedule: If implementing the compliance schedule does not result in compliance with water quality standards at the time the compliance schedule expires, Douglas PUD may explore other alternative approaches available in the water quality standards, including a second compliance schedule or alternative provided in WAC 173-201A-510(5)(g).
  - ii) Ecology reserves the right to require additional measures and use all available compliance tools as appropriate.
- g) Additional Requirements
  - i) Minimizing Spill. The PUD shall manage spill toward meeting water quality criteria for TDG during all flows below 7QIO, as follows:
    - a. Minimize voluntary spill through operations, including to the extent practicable, by scheduling maintenance based on predicted flows;
    - b. Avoid spill by continuing to coordinate operations with upstream dams, to the extent that it reduces TDG;
    - c. Maximize powerhouse discharge, especially during periods of high river flows; and
    - d. During fish passage season, manage voluntary spill levels in real time in an effort to continue to meet TDG numeric criteria consistent with the GAP.
  - ii) Changes in Operation or Structure. Douglas PUD shall provide Ecology with the opportunity to review and condition any non-routine operational or structural changes affecting TDG that are not identified in this Certification. If Douglas PUD, at any point, considers modifying any of the measures identified in the spill Playbook, Douglas PUD shall immediately develop proposed alternative(s) that will produce levels of TDG equal to or less than those estimated to be produced by the measures to be replaced. These measures should be implementable in a similar timeframe and must be submitted to Ecology for review and approval prior to implementation.
  - iii) TDG TMDL. The Project shall be deemed in compliance with the TMDL for TDG as long as it remains in compliance with the terms

of this Certification. This Certification, including the GAPs and the WQAP, is intended to serve as the Project's portion of the Detailed Implementation Plan for the TDG TMDL.

### **3) Water Temperature (Objective 2)**

#### **a) Monitoring**

- i) Douglas PUD shall monitor water temperatures at three boundary locations of the Project (Methow River RM 1.5, Okanogan River RM 10.5, and Columbia River RM 544.5) and in the Well Dam forebay and tailrace on an hourly basis, from April 1 to October 31.
- ii) Douglas PUD shall continue to collect hourly fish ladder temperatures 24 hours a day during the upstream fish passage season (currently May 1 to November 15) at Pool No. 39 on the east ladder. Douglas PUD shall also monitor water temperatures hourly in the auxiliary water supply system and near the east shore of the Wells Dam forebay (bottom, middle, and surface depths) during this same time period.
- iii) Douglas PUD shall record temperature data (hourly) and transmit it on a daily basis to a web-accessible database maintained by Douglas PUD and available to Ecology, regional fish management agencies, and the public.

#### **b) Temperature Report**

Douglas PUD shall prepare an annual report of the monitoring results and analyses, in a format approved by Ecology, and submit it by April 30th of the following year.

#### **c) Temperature TMDL Development and Implementation**

- i) Douglas PUD shall participate in U.S. EPA Region 10's water temperature TMDL development for the U.S. portion of the Columbia River, in coordination with the Parties of the ASWG. Douglas PUD shall maintain the CE-QUAL model and temperature data from the monitoring program and make these available to EPA and other entities to assist in the development of the Columbia River temperature TMDL, upon request.
- ii) When the TMDL and its implementation plan are complete and approved by EPA, Ecology anticipates that it may amend this Certification to include requirements consistent with the TMDL.

- iii) If a TMDL is not timely approved by EPA, Ecology may establish an allocation. In this case, Ecology will work with the ASWG and other interested parties to identify reasonable and feasible measures.
- iv) This plan does not exclude the option of the ASWG to consider modifying the water quality standard through a use attainability analysis or other process.

d) Measures to Address Non-Compliance

- i) Douglas PUD shall report information indicative of non-compliance with water temperature immediately to Ecology for regulatory discretion and to the ASWG for consideration. Such information may include changes in Project operations likely to increase water temperature or observations inconsistent with related environmental parameters.
- ii) If the Project is found to be consistently out of compliance with water temperature at any time during the new license term, Douglas PUD shall, in coordination with the ASWG and subject to approval by Ecology, take the following steps:
  - a. Evaluate alternative Project operations or any new reasonable and feasible technologies that have been developed;
  - b. After the evaluation, if Ecology determines measures are available to achieve compliance, set up a compliance schedule to attain compliance, in accordance with Section 3.0(5) (WAC 173-201A-510(5)).
  - c. After the evaluation, if no new reasonable and feasible improvements have been identified, propose an alternative to achieve compliance with the standards, such as site-specific criteria, a use attainability analysis, or a water quality offset.
- iii) Ecology reserves the right to require additional measures and use all available compliance tools as appropriate.

**4) Other Numeric Criteria (Objective 3)**

- a) Douglas PUD shall report information indicative of non-compliance with other numeric criteria immediately to Ecology for regulatory discretion and to the ASWG for consideration. This includes existing or new criteria for toxic substances in water or sediments within the boundaries of the Project.

- b) Ecology shall evaluate the information, and, if needed, require Douglas PUD to develop a plan to identify and address Project-related impacts, if any.
  - i) After the evaluation, if Ecology determines measures are available to achieve compliance, set up a compliance schedule to attain compliance, in accordance with Section 3.0(5) (WAC 173-201A-510(5)).
  - ii) After the evaluation, if no reasonable and feasible improvements have been identified, Douglas PUD may propose an alternative to achieve compliance with the standards, such as site-specific criteria, a use attainability analysis, or a water quality offset.
- c) Ecology reserves the right to require additional measures and use all available compliance tools as appropriate.

#### **5) Spill Prevention and Control (Objective 4)**

##### a) Spill Prevention and Control Requirements

Douglas PUD shall operate the Project in a manner that will minimize spill of hazardous materials and implement effective countermeasures in the event of a hazardous materials spill. Douglas PUD shall update the Project Spill Prevention Control and Countermeasures Plan (SPCC) pursuant to FERC requirements and recommendations provided by Ecology. Douglas PUD shall comply and operate the Project with the updated version(s) of the SPCC.

##### b) Participation in the Columbia and Snake River Spill Response Initiative

Douglas PUD shall continue participation in the Columbia and Snake River Spill Response Initiative (CSR-SRI). The CSR-SRI is a collaborative effort made up of the local, state, and federal oil spill response community as well as members of industry and was developed to address the immediate need for oil spill preparedness and response in the area along the Columbia and Snake Rivers.

##### c) Inspections

Douglas PUD shall, upon reasonable notice, allow Ecology staff or representatives access to inspect the Project, including inside the dam, for the purpose of assessing Spill Prevention and Control measures and compliance with this section 6.7 5(d). Following inspection, Douglas PUD shall address oil and hazardous material prevention and control issues

identified by Ecology.

d) Additional Requirements - Spill Prevention and Control

- i) Discharge of oil, fuel or chemicals into state waters or onto land where such contaminants could potentially drain into state waters is prohibited.
- ii) Douglas PUD shall continue to provide Ecology, Central Region Office, Spills and Water Quality Programs, with copies of its most up-to-date SPCC version. Copies of the Spill Prevention Control and Countermeasures Plan (SPCC) shall be kept on site by Douglas PUD and made readily available for reference by the PUD, its contractors and consultants, and Ecology.
- iii) In the event of a discharge of oil, fuel or chemicals into state waters, or onto land where such contaminants could potentially drain into state waters, containment and clean-up efforts shall begin immediately and be completed as soon as possible, taking precedence over normal work. Clean-up shall include proper disposal of any spilled material and used clean-up materials.
- iv) Spills into state waters, spills onto land where contaminants could potentially drain into state waters, and any other significant water quality impacts, shall be reported immediately to the Washington Emergency Management Division at 1-800-258-5990 and the National Response Center at 1-800-424-8802. Notification shall include a description of the nature and extent of the problem, any actions taken to correct the problem, plus any proposed changes in operations to prevent further problems.

**6) Regional Forums (Objective 5)**

- a) Participation in Regional Water Quality Forums. Douglas PUD shall continue to participate in both the Water Quality Team and Adaptive Management Team meetings to address regional water quality issues, including sharing the results from monitoring, measuring, and evaluating water quality in the Wells Project.
- b) Project Operations. Douglas PUD may, following notice and opportunity for hearing, coordinate the operation of the project, electrically and hydraulically, with other mid-Columbia hydroelectric operations to the extent practicable. Coordinated operations are intended to reduce spill, increase generating efficiencies and thereby reduce the potential for

exceedances of the TDG numeric criteria. These coordinated operations should be beneficial to TDG compliance and Aquatic Resources.

## 7) **Water Quality Study Plans and Reports - General Requirements**

### a) Study Plans.

- i) Douglas PUD shall prepare study plan(s) that include a quality assurance project plan(s) (QAPP) for each water quality parameter to be monitored in each plan. The QAPPs shall follow the Guidelines for Preparing Quality Assurance Project Plans for Environmental Studies (July 2004 Ecology Publication Number 04-03-030) or its successor. The QAPPs shall contain, at a minimum, a list of parameter(s) to be monitored, a map of sampling locations, and descriptions of the purpose of the monitoring, sampling frequency, sampling procedures and equipment, analytical methods, quality control procedures, data handling and data assessment procedures and reporting protocols.
- ii) Douglas PUD shall review and update the QAPPs annually based on a yearly review of data and data quality. Ecology may also require future revisions to the QAPP based on monitoring results, regulatory changes, changes in Project operations, and/or the requirements of TMDLs. The initial QAPPs and any changes shall be submitted to the ASWG for review and are subject to approval by Ecology. Implementation of the monitoring program shall begin upon Ecology's written approval of the QAPP, unless otherwise provided by Ecology.

### b) Annual WQS Report.

- i) Douglas PUD shall provide a draft annual report to the ASWG summarizing the previous year's water quality activities and activities proposed for the coming year, in accordance with the requirements in this Order and as determined by the ASWG and Ecology. The report shall include any decisions, statements of agreement, evaluations, or changes made pursuant to this Order. If significant activity was not conducted in a given year, Douglas PUD may prepare a memorandum providing an explanation of the circumstances in lieu of an annual report. A summary of monitoring results and analyses of compliance with WQS numeric criteria will be included in an appendix(ces) to the annual report (these may be separate reports; e.g. for TDG and temperature).



- ii) The results shall be provided in a format prescribed by Ecology. The report shall be subject to review and approval by Ecology. Ecology will use the monitoring results to track the project's progress toward meeting and remaining in compliance with state water quality standards.

## 6.8 Construction Activities

- a) While the existing project is not a construction site, all development or mitigation projects proposed under relicensing must meet the following conditions.
- b) For future construction activities requiring a separate 401 certification (e.g., those requiring an individual 404 permit from the Army Corps of Engineers), Douglas PUD shall comply with all conditions in that additional 401 certification.
- c) All water quality criteria as specified in WAC 173-201A apply to any construction work needed to implement development or mitigation projects required under the new FERC license.
- d) Unless otherwise stated in another Section 401 certification (see above), the turbidity criteria (WAC 173-201A) may be modified to allow a temporary mixing zone during and immediately after in-water or shoreline construction activities that disturb in-place sediments. A temporary turbidity mixing zone is subject to the constraints of WAC 173-201A, and is authorized only after the activity has received all other necessary local and state permits and approvals and after the implementation of appropriate best management practices (BMPs) to avoid or minimize disturbance of in-place sediments and exceedances of the turbidity criterion. The temporary turbidity mixing zone for waters with flows greater than 100 cubic feet per second (cfs) at the time of construction is 300 feet downstream of the activity causing the turbidity exceedances.
- e) For all other future construction activities, a water quality protection plan (WQPP) shall be prepared and implemented for each project involving work in or near water. The WQPP shall include:
  - i) A copy of the Hydraulic Project Approval (HPA) per Chapter 77.55.021 RCW for the project;
  - ii) A description of all Best Management Practices (BMPs) to be employed for in and near-water work;
  - iii) A plan for sampling and monitoring during construction;

- iv) A plan for implementing mitigation measures should a water quality violation occur; and
- v) A written procedure for reporting any water quality violations to Ecology.
- f) Douglas PUD shall submit each WQPP to Ecology for review and written approval prior to starting work.

## **7.0 Penalties and Appeal**

Any person who fails to comply with any provision of this Certification shall be liable for criminal and civil penalties as provided under state and/or federal law.

You have a right to appeal this Order to the Pollution Control Hearing Board (PCHB) within 30 days of the date of receipt of this Order. The appeal process is governed by Chapter 43.21B RCW and Chapter 371-08 WAC. "Date of receipt" is defined in RCW 43.21B.001(2).

To appeal you must do the following within 30 days of the date of receipt of this Final Order:

File your appeal and a copy of this Order with the PCHB (see addresses below). Filing means actual receipt by the PCHB during regular business hours.

Serve a copy of your appeal and this Order on Ecology in paper form by mail or in person (see addresses below.) E-mail is not accepted.

You must also comply with other applicable requirements in Chapter 43.21B RCW and Chapter 371-08 WAC.

**APPENDIX B**

**U.S. DEPARTMENT OF COMMERCE, NATIONAL MARINE FISHERIES  
SERVICE FISHWAY PRESCRIPTION FOR THE WELLS HYDROELECTRIC  
PROJECT NO. 2149 FILED JULY 21, 2011**

**Article 1. Prescription for Incorporating the Anadromous Fish  
Agreement and Habitat Conservation Plan into the Project  
License**

For the protection, mitigation of damages to, and the enhancement of fishery resources the licensee shall carry out its obligations, in their entirety, as set forth in the Anadromous Fish Agreement and Habitat Conservation Plan for the Wells Hydroelectric Project No. 2149 filed with the Commission on November 24, 2003, and as approved by the Commission at 107 FERC ¶61,280 and ¶61,281.

## APPENDIX C

### **U.S. DEPARTMENT OF INTERIOR, FISH AND WILDLIFE SERVICE FISHWAY PRESCRIPTION FOR THE WELLS HYDROELECTRIC PROJECT NO. 2149 FILED AUGUST 1, 2011**

#### 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.

## APPENDIX D

### **REASONABLE AND PRUDENT MEASURES AND TERMS AND CONDITIONS INCLUDED IN THE NATIONAL MARINE FISHERIES SERVICE'S BIOLOGICAL OPINION FOR THE WELLS HYDROELECTRIC PROJECT NO. 2149 FILED MARCH 7, 2012**

#### **2.8.3 Reasonable and Prudent Measures and Terms and Conditions**

“Reasonable and prudent measures” are nondiscretionary measures to minimize the amount or extent of incidental take (50 CFR 402.02). “Terms and conditions” implement the reasonable and prudent measures (50 CFR 402.14). These must be carried out for the exemption in section 7(o)(2) to apply.

The following RPMs are necessary and appropriate to minimize the effect of anticipated incidental take of UCR spring-run Chinook salmon and UCR steelhead. FERC must require the licensee to minimize incidental take as follows:

1. Minimize incidental take from the operation of the project by requiring the licensee to adhere to all the measures in the Anadromous Fish Agreement and Wells Habitat Conservation Plan as approved and adopted by the Commission in 2004 and incorporated into the proposed license.
2. Minimize incidental take from the unanticipated release of hazardous substances, toxics, excessive sediment, debris, and other materials into the Columbia River and its tributaries, the fish passage and rearing facilities by following provisions of the Water Quality Management Plan.
3. Minimize incidental take from in-water and near-water construction activities by using BMPs for the proposed action to avoid or minimize adverse effects to water quality and aquatic resources.
4. FERC shall include the standard license reopener clause in any license issued for this project to ensure continuing agency discretion throughout the life of the license as may be necessary to protect species listed under the ESA.

To be exempt from the prohibitions of Section 9 of the ESA, FERC must ensure that Douglas PUD fully carries out the conservation measures in the new license to be issued by FERC. FERC must include in the license the following terms and conditions that carry out the RPMs listed above. Partial compliance with these terms and conditions may result in more take than anticipated, and invalidate this take exemption. These terms and conditions constitute no more than a minor change to the proposed action because they are consistent with the basic design of the proposed action.

***To carry out RPM #1, FERC or its Licensee must undertake the following:***

1. Require the Licensee to monitor fish populations and habitat and passage as described in the provisions of the Anadromous Fish Agreement and Wells Habitat Conservation Plan that relate to Upper Columbia River Spring Chinook and Upper Columbia River steelhead (including, but not limited to fish passage, fish supplementation, aquatic habitat conditions [e.g., flows and habitat restoration], construction, monitoring, and fish sampling) for this project. The Licensee must report all incidental take that occurs during these activities to NMFS. The Licensee must report the results of monitoring fish and fish passage and water quality annually to NMFS. This may be concurrent with the Project annual reports to FERC and shall be provided to NMFS by March 31 for take, which occurred in the prior calendar year. Listed fish must be handled with extreme care and kept in water, with adequate circulation, to the maximum extent possible during sampling and monitoring. When a mix of species are captured or collected, ESA-listed fish must be processed first, to the extent possible, to minimize stress. Listed fish must be transferred using a sanctuary net (which holds water during transfer) whenever practical to prevent the added stress of being dewatered. Require the Licensee to monitor juvenile and adult mortality to ensure that incidental take levels are not exceeded. The Licensee must develop the monitoring measures in conjunction with NMFS, and receive our approval of the monitoring plan.

Incidental take should be reported to:

National Marine Fisheries Service  
Hydropower Division, FERC and Water Diversions  
Attention: Keith Kirkendall, Branch Chief  
1201 NE Lloyd Blvd., Suite 1100  
Portland, OR 97232

***To carry out RPM #2, FERC or its Licensee must undertake the following:***

1. Follow and implement all terms and conditions of the Wells project Aquatic Settlement Agreement Water Quality Management Plan.

***To carry out RPM #3, FERC or its Licensee must undertake the following:***

1. Require the Licensee to use best management practices in all construction work, including adhering to certain timing restrictions. Spill control equipment must be on site and in quantities sufficient to effectively contain and recover accidental release of chemicals. Project personnel must be familiar with spill control equipment operation and procedures prior to the initiation of work. Instream work shall be conducted according to BMPs, consistent with WDFW's Hydraulic Code (RCW 77-55) by conforming to a Hydraulic Project Approval (WAC 220-110) obtained from WDFW. In the event that the regulations are significantly modified or repealed

during the license term, the terms in effect in 2011 shall continue in force for the term of the license to protect fish and their habitat.



**APPENDIX E****REASONABLE AND PRUDENT MEASURES AND TERMS AND CONDITIONS  
INCLUDED IN THE U.S. FISH AND WILDLIFE SERVICE'S BIOLOGICAL  
OPINION FOR THE WELLS HYDROELECTRIC PROJECT NO. 2149  
FILED MARCH 19, 2012****Reasonable and Prudent Measures**

Reasonable and prudent measures (RPMs) are non-discretionary measures designed to minimize impacts on specific individuals or habitats affected by the proposed action, and require only minor changes to the project. The Service believes that the following reasonable and prudent measures are necessary and appropriate to minimize take of the bull trout.

RPM 1. FERC shall require Douglas PUD, in coordination with the Service, to provide adequate year-round passage conditions for all life stages of bull trout at all Project facilities.

RPM 2. FERC shall require Douglas PUD, in coordination with the Service, to minimize the effects of spillway operations and hydrographic variation to all life stages of bull trout at all Project facilities.

RPM 3. FERC shall require Douglas PUD, in coordination with the Service, to minimize the effects of the Hatchery Supplementation Program to all life stages of bull trout.

RPM 4. FERC shall require Douglas PUD, in coordination with the Service, to minimize the effects of the Aquatic Resource Management Plans (white sturgeon, Pacific lamprey, resident fish, aquatic nuisance species, and water quality) and the Predator Control Program to all life stages of bull trout.

RPM 5. FERC shall require Douglas PUD, in coordination with the Service, to design and implement a bull trout monitoring program that will adequately detect and quantify Wells Hydroelectric Project impacts, including those associated with the Wells Dam, Twisp Weir trapping facilities, and hatchery facilities. This information will allow the Service to determine whether authorized take levels are exceeded.

## Terms and Conditions

In order to be exempt from the prohibitions of section 9 of the Act, the action agency must comply with the following terms and conditions, which implement the reasonable and prudent measures described above and also outline required reporting and monitoring requirements. *These terms and conditions are non-discretionary.* All plans called for in these terms and conditions shall be provided to the Service upon completion.

To implement RPM 1: FERC shall require Douglas PUD, in coordination with the Service, to provide adequate year-round passage conditions for bull trout at all Project facilities.

1. Upstream and Downstream Passage for Adult and Sub-Adult Bull Trout (BTMP Section 4.1.1): FERC shall require Douglas PUD, in coordination with the Service, to 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.
2. Bull Trout Passage Performance Standard: FERC shall require Douglas PUD, in coordination with the Service, to 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 Douglas PUD 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, Douglas PUD shall implement the bull trout upstream and downstream measures consistent with the BTMP.
3. Upstream Fishway Operations Criteria (BTMP Section 4.1.3): FERC shall require Douglas PUD, in coordination with the Service, to operate the upstream fishway at Wells Dam in accordance with criteria outlined in the Wells AFA/HCP.
4. Bypass Operations Criteria (BTMP Section 4.1.4): FERC shall require Douglas PUD, in coordination with the Service, to operate the bypass system at Wells Dam in accordance with criteria outlined in the Wells AFA/HCP.

5. Implement Reasonable and Appropriate Measures to Modify the Upstream Fishway and Downstream Bypass if Adverse Impacts on Bull Trout are Identified (BTMP Section 4.3): FERC shall require Douglas PUD, in coordination with the Service, to identify, design, implement, and evaluate reasonable and feasible measures to modify the upstream fishway, downstream bypass, or operations to reduce the identified incidental take of bull trout if monitoring (Term and Condition #10) identifies upstream or downstream passage problems for bull trout, in consultation with the Service, WCC and the Aquatic SWG. Study protocols and radio-telemetry assessment methodologies prescribed above in Term and Condition #10 and #11, shall be used to evaluate the effectiveness of any additional measures implemented to reduce the incidental take of bull trout. Upon completion of the evaluation, the Service 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.

To implement RPM 2: FERC shall require Douglas PUD, in coordination with the Service, to minimize the effects of hydrographic variation to all life stages of bull trout at all Project facilities.

6. Investigate Entrapment or Stranding of Bull Trout during Periods of Low Reservoir Elevation (BTMP Section 4.4): FERC shall require Douglas PUD, in coordination with the Service, to continue to investigate potential entrapment or stranding areas for bull trout through periodic monitoring when periods of low reservoir elevation expose identified sites. During the first five years of the new license, Douglas will implement up to five bull trout entrapment/stranding assessments during periods of low reservoir elevation (below 773' MSL). If no incidences of bull trout stranding are observed during the first five years of study, additional assessment will take place every fifth year during the remainder of the license term, unless waived by the Aquatic SWG. If bull trout entrapment and stranding result in take in exceedance of the authorized incidental take level, then reasonable and appropriate measures will be implemented by Douglas, in consultation with the Aquatic SWG, to address the impact.

To implement RPM 3: FERC shall require Douglas PUD, in coordination with the Service, to minimize the effects of the Hatchery Supplementation Program to all life stages of bull trout.

7. Bull Trout Monitoring During Hatchery Activities (BTMP 4.6.1): FERC shall require Douglas PUD, in coordination with the Service, to monitor hatchery actions (e.g., salmon trapping, sturgeon brood stocking and capture activities) that may encounter adult and subadult bull trout resulting from incidental capture and take. Actions to be monitored shall be associated with the Wells Hatchery, the Methow Hatchery, and any future facilities directly funded by Douglas. If the incidental take

of bull trout is exceeded due to Douglas's hatchery actions then Douglas will develop a plan, in consultation with the Aquatic SWG, to address the identified factors contributing to the exceedance of the allowable level of incidental take.

To implement RPM 4: FERC shall require Douglas PUD, in coordination with the Service, to minimize the effects of implementing the Aquatic Resource Management Plans (white sturgeon, Pacific lamprey, resident fish, aquatic nuisance species, and water quality) and the Predator Control Program to all life stages of bull trout.

8. Monitoring Other Aquatic Resource Management Plan Activities and Predator Control Program for Incidental Capture and Take of Bull Trout (BTMP Section 4.5.1): FERC shall require Douglas PUD, in coordination with the Service, to monitor activities associated with the implementation of other Aquatic Resource Management Plans for white sturgeon, Pacific lamprey, resident fish, aquatic nuisance species, and water quality and Predator Control Program that may result in the incidental capture and take of bull trout. If the incidental take of bull trout is exceeded due to the implementation of other Aquatic Resource Management Plan activities, then Douglas PUD will develop a plan, in consultation with the Aquatic SWG, to address the identified factors contributing to the exceedance of the allowable level of incidental take. If the incidental take of bull trout is exceeded due to the implementation of the Predator Control Program, then Douglas will develop a plan, in consultation with the HCP Coordinating Committee and the Aquatic SWG, to address the identified factors contributing to the exceedance of the allowable level of incidental take.

To implement RPM 5: FERC shall require Douglas PUD, in coordination with the Service, to design and implement a bull trout monitoring program that will adequately detect and quantify Wells Hydroelectric Project impacts, including those associated with the Wells Dam, Twisp Weir trapping facilities, and hatchery facilities. This information will allow the Service to determine whether authorized take levels are exceeded.

9. Upstream Fishway Counts (BTMP Section 4.1.2): FERC shall require Douglas PUD, in coordination with the Service, to conduct video monitoring in the Wells Dam fishways from May 1<sup>st</sup> through November 15<sup>th</sup> to count and provide information on the population size of upstream moving bull trout.
10. Adult Bull Trout Upstream and Downstream Passage Evaluation (BTMP Section 4.2.1): FERC shall require Douglas PUD, in coordination with the Service, to periodically monitor incidental take 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 ten years thereafter during the new license term, Douglas PUD shall conduct a 1 year monitoring study to verify continued compliance with the bull trout passage

performance standard (Term and Condition #2). 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 (Term and Condition #2), then no additional actions are needed. If the monitoring results demonstrate that Douglas PUD is no longer in compliance with the bull trout passage performance standard (Term and Condition #2), then the monitoring study will be replicated to confirm the results. If the results after two years of monitoring demonstrate that Douglas PUD is no longer in compliance with the bull trout passage performance standard (Term and Condition #2), then Douglas PUD shall, pursuant to Term and Condition #5, develop and implement additional measures to improve bull trout passage until compliance with the bull trout passage performance standard (Term and Condition #2) is achieved. If the bull trout counts at Wells Dam increase more than twice the existing 5-year average or if there is a significant change in the operation of the fish ladders, bypass, or hydrocombine, then Douglas PUD shall, in consultation with the Service, 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 (Term and Condition #2). Although the BTMP specifies to Douglas PUD to utilize radio-telemetry as the recommended monitoring method, the Service concludes that future monitoring technologies may be utilized in the implementation of this term and condition.

11. Adult Bull Trout Passage Evaluation at Off-Project Collection Facilities (BTMP Section (4.2.2)): FERC shall require Douglas PUD, in coordination with the Service, beginning in year one of the new license, to conduct a one-year radio-telemetry evaluation to assess incidental take 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. Douglas PUD 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 Douglas PUD is not in compliance with the bull trout passage performance standard (Term and Condition #2), then the evaluation will be replicated to confirm the results. If the results after two years of evaluation demonstrate that Douglas PUD is not in compliance with the bull trout passage performance standard (Term and Condition #2), then Douglas PUD shall develop, implement, and evaluate additional measures, in consultation with the Service, WCC and the Aquatic SWG, until the Service determines that the bull trout passage performance standard has been achieved. At such time as the Service determines the bull trout passage performance standard has been achieved, the implementation of this measure shall be integrated into the 1 year telemetry monitoring program that

is to be conducted every ten years (beginning in year 10 of the new license) at Wells Dam as identified in Term and Condition #10 above. Although the BTMP specifies to Douglas PUD to utilize radio-telemetry as the recommended monitoring method, the Service concludes that future monitoring technologies may be utilized in the implementation of this term and condition.

12. Sub-Adult Bull Trout Monitoring (BTMP Section 4.2.3): FERC shall require Douglas PUD, 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), in consultation with the Service, and the Wells Aquatic SWG, implement reasonable and appropriate methods for monitoring sub-adult bull trout. Although the BTMP states that >10 sub-adults per calendar year as the threshold, new information leads the Service to conclude that 31 sub-adults per calendar year is a more appropriate threshold. Specifically, Douglas PUD 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 Service and the Aquatic SWG.
  
13. Funding Collection of Tissue Samples and Genetic Analysis (BTMP Section 4.5.2): FERC shall require Douglas PUD, in coordination with the Service, to collect up to 10 adult bull trout tissue samples in the Wells Dam fishway facilities over a period of one year and fund their genetic analysis. Genetic tissue collection will take place concurrent with the implementation of the bull trout radio-telemetry monitoring study. Any sub-adult bull trout collected during these activities will also be incorporated into the bull trout genetic analysis. Beginning in year 1 of the new license, Douglas will collect up to 10 adult bull trout tissue samples from the Twisp River brood stock collection facility over a period of one year and will fund their genetic analysis. Genetic tissue collection will take place concurrent with the implementation of the off-Project bull trout radio-telemetry monitoring study. This term and condition is consistent with other section 10(a)(1)(a) permits that involve handling of bull trout. The analysis will provide valuable information on the conservation status and genetic relationships between bull trout populations in the Columbia basin. This information will be used to determine the local populations impacted by Project operations, and when used in conjunction with other data such as movement data and redd counts, the resiliency of local populations impacted by the proposed action may be determined. Samples will be submitted to the Service (Central Washington Field Office in Wenatchee, Washington).

## **Reporting Requirements**

In order to monitor the impacts of incidental take, Douglas PUD shall prepare an annual report describing the progress of implementing the proposed relicensing and its impact on the bull trout. The report, which shall be submitted to the Service (Central Washington Field Office) annually on or before April 15th, shall list and describe the work that was completed and the number of bull trout, if any, observed and/or incidentally taken (i.e., injured or killed) during the course of implementing the Project.

Upon locating a dead, injured, or sick endangered or threatened species specimen, initial notification must be immediately made to the nearest Service Law Enforcement Office (Redmond, Washington; telephone 425-883-8122) and reported to the Service's Central Washington Field Office (509-665-3508). Care should be taken in handling sick or injured specimens to ensure effective treatment and care, and in handling dead specimens to preserve biological material in the best possible state for later analysis of cause of death. In conjunction with the care of sick or injured endangered species and preservation of biological materials from a dead animal, the finder has the responsibility to carry out instructions provided by Service Law Enforcement to ensure that evidence intrinsic to the specimen is not unnecessarily disturbed.

The RPMs, with their implementing terms and conditions, are designed to minimize the impact of incidental take that might otherwise result from the proposed action. If, during the course of the action, the level of incidental take described above is exceeded, such additional take represents new information requiring reinitiation of consultation (assuming the Commission retains discretion or control over the action) and review of the RPMs provided. Douglas PUD must immediately provide an explanation of the causes of the taking and review with the Service the need for possible modification of the RPMs.