

**123 FERC ¶ 62,259**  
UNITED STATES OF AMERICA  
FEDERAL ENERGY REGULATORY COMMISSION

Public Utility District No. 1 of Cowlitz County,  
Washington

Project No. 2213-011

ORDER ISSUING NEW LICENSE

(June 26, 2008)

1. On April 28, 2004, Public Utility District No. 1 of Cowlitz County, Washington (Cowlitz PUD) filed an application for a new license, pursuant to sections 4(e) and 15 of the Federal Power Act (FPA),<sup>1</sup> for the continued operation and maintenance of the 66.8-megawatt (MW)<sup>2</sup> Swift No. 2 Project No. 2213, located on the North Fork Lewis River in Cowlitz and Skamania Counties, Washington. The project occupies federal lands administered by the U.S. Department of Agriculture, Forest Service (Forest Service).<sup>3 4</sup>

2. Cowlitz PUD's application for Project No. 2213 is one of four applications filed to relicense projects on the North Fork Lewis River (referred to as the Lewis River in this order). In addition to Cowlitz PUD's license application, PacifiCorp filed license applications for three other Lewis River Projects located immediately upstream and downstream of the Swift No. 2 Project—the upstream Swift No. 1 Project No. 2111 on April 28, 2004, the downstream Merwin Project No. 935 on April 28, 2004, and the downstream Yale Project No. 2071 on May 5, 1999. The existing licenses for these four

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<sup>1</sup> 16 U.S.C. §§ 797(e) and 808 (2000), respectively.

<sup>2</sup> In the license application filed April 28, 2004, Cowlitz PUD had stated that the project is a 70.0 MW project. However, in an order amending license, revising annual charges, and approving as-built exhibits, the Commission determined that the authorized installed capacity is 66.8 MW (*see* 119 FERC ¶ 62,259 issued June 27, 2007).

<sup>3</sup> The project occupies 3.79 acres of Forest Service land. In addition, the project also affects 19.63 acres of patented licensee-owned lands subject to section 24 of the FPA, in which the United States has reserved power development rights.

<sup>4</sup> The project is required to be licensed under section 23(b)(1) of the FPA, 16 U.S.C. § 817 (2000), because it occupies federal lands.

Lewis River Projects expired between 2001 and 2006.<sup>5</sup> In this order, I refer to the four projects collectively as the Lewis River Projects. While granting a new license for the Swift No. 2 Project is the subject of this order, I am concurrently issuing three other orders granting new licenses for the other three Lewis River Projects.<sup>6</sup>

## BACKGROUND

3. The Federal Power Commission (FPC) issued the original license for the Swift No. 2 Project No. 2213 on November 28, 1956.<sup>7</sup> The license expired on April 30, 2006, and since that time Cowlitz PUD has operated the project under an annual license pending the disposition of its new license application.<sup>8</sup>

4. On December 3, 2004, PacifiCorp and Cowlitz PUD filed a comprehensive Settlement Agreement (Agreement) entered into with 22 stakeholders.<sup>9</sup> The applicants' proposed action is to relicense the projects in accordance with the terms of the Agreement. The Agreement provides for: (1) a phased approach to produce self-sustaining, naturally-reproducing, harvestable anadromous salmonid populations above Merwin dam; (2) reconnecting all life stages of bull trout populations in the Lewis River

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<sup>5</sup> The Yale Project license expired in 2001, but the processing of that application was held in abeyance so that all four projects could be considered together in a single environmental document. In addition, the expiration date of the Merwin Project license was accelerated from December 2009 to April 2006 to coincide with the expiration dates for the Swift No. 1 and Swift No. 2 licenses.

<sup>6</sup> See *PacifiCorp*, 123 FERC ¶¶ 62,257; 62,258; and 62,260 (2008).

<sup>7</sup> 16 FPC 1281 (1956).

<sup>8</sup> See 16 U.S.C. § 808(a)(1) (2000).

<sup>9</sup> PacifiCorp; Cowlitz PUD; National Marine Fisheries Service (NMFS); National Park Service; U.S. Bureau of Land Management (BLM); U.S. Fish and Wildlife Service (FWS); Forest Service; Confederated Tribes and Bands of the Yakama Nation (Yakama Nation); Washington Department of Fish and Wildlife (Washington Fish and Wildlife); Washington Interagency Committee for Outdoor Recreation; Cowlitz County; Cowlitz-Skamania Fire District No. 7; North Country Emergency Medical Service; City of Woodland; Woodland Chamber of Commerce; Lewis River Community Council; Lewis River Citizens-at-Large; American Rivers; Fish First; Rocky Mountain Elk Foundation, Inc; Trout Unlimited; and the Native Fish Society. On February 10, 2005, PacifiCorp filed additional signature pages to add the following four parties to the Agreement: the Lower Columbia River Fish Recovery Board, Clark County, Skamania County, and Cowlitz Indian Tribe (Cowlitz Tribe).

basin; (3) funding measures to enhance and improve wetlands, riparian, and riverine habitats; (4) restoring marine-derived nutrients to the upper watershed; (5) developing a hatchery and supplementation (release of artificially propagated fish) program that supports the reintroduction of anadromous fish to the upper watershed upstream of Merwin dam, and the continued harvest of resident and native anadromous fish species; (6) implementing instream flows, including ramping rates, that benefit fish and wildlife in the basin; (7) acquiring interests in land and managing lands to benefit a broad range of fish, wildlife, and native plant species; (8) diversifying and managing a comprehensive suite of recreational opportunities; (9) improving flood management during the likely high-flow event periods; (10) protecting known and yet-to-be discovered cultural resources; and (11) addressing project-related transportation, communications, public safety, and law enforcement needs. These measures are described in detail in the Order on Offer of Settlement and Issuing New License for the Swift No. 1 Project (Master Order), one of the four orders issued concurrently for the Lewis River Projects. The Agreement is attached as Appendix A of the Master Order for informational purposes.

5. On December 9, 2004, the Commission issued a notice of the Agreement, and that the four applications and applicant-prepared environmental assessments were accepted for filing. The notice solicited motions to intervene, protests, comments, and final recommendations, terms and conditions, and prescriptions. Timely motions to intervene were filed by the Washington Fish and Wildlife; jointly by American Rivers, Trout Unlimited, and Native Fish Society; U.S. Department of the Interior (Interior); Forest Service; Washington Department of Ecology (Washington Ecology); Cowlitz PUD; Cowlitz Tribe; NMFS; and Yakama Nation. Fish First filed a late motion to intervene, which was granted.<sup>10</sup> None of the intervenors oppose the project.

6. On September 23, 2005, the Commission staff issued a draft environmental impact statement (EIS) for the relicensing of all four Lewis River Projects. American Rivers, Cowlitz Tribe, Cowlitz PUD, NMFS, PacifiCorp, Swiftview Owners Group, Three Rivers Recreational Area, Interior, Forest Service, U.S. Environmental Protection Agency (EPA), Washington Fish and Wildlife, Washington Ecology, and Yakama Nation filed comments on the draft EIS. The final EIS was issued on March 24, 2006. The potential environmental impacts of the measures proposed in the Agreement, along with additional staff-recommended measures, were considered in the EIS. References in this order to the EIS are to the final EIS, unless otherwise noted.

7. On December 20, 2005, Cowlitz PUD filed draft license articles implementing the terms of the Agreement for the Swift No. 2 Project. Many of these requirements duplicate the mandatory conditions of the section 18 prescriptions and the water quality certifications and the provisions of the National Marine Fisheries Service (NMFS)

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<sup>10</sup> See unpublished notice dated May 30, 2007.

Biological Opinion. While the proposed draft articles are not included in the license, this order includes requirements consistent with the Agreement and proposed articles, except as noted below.

8. The motions to intervene, comments, and recommendations have been fully considered in determining whether, and under what conditions, to issue this license.

## **PROJECT AREA**

9. The Lewis River is a tributary of the Columbia River in southwest Washington, with a drainage area of 1,050 square miles. The river originates in the Cascade Range of the Gifford Pinchot National Forest and flows westward about 93 miles, joining the Columbia River near Woodland, Washington.

10. From upstream to downstream, the Lewis River hydropower projects include Swift No. 1 [river mile (RM) 47.9], Swift No. 2 (RM 44), Yale (RM 34.2), and Merwin (RM 19.5), and affect almost 40 miles of river.

11. The Lewis River Basin downstream of Merwin dam supports wild fall Chinook salmon and hatchery stocks of spring Chinook, early and late coho salmon, and winter and summer steelhead. The project area is described in more detail in the Master Order.

## **PROJECT DESCRIPTION**

12. The Swift No. 2 Project is located between the Swift No. 1 Project and Yale Lake, the reservoir for the Yale Project. It consists of a canal, powerhouse, tailrace, and substation, and operates with flows released from the Swift No. 1 powerhouse into the 3-mile-long Swift No. 2 canal.<sup>11</sup> The upstream canal section is earthen, and the downstream 1-mile-long section is concrete-lined. The project power canal has a spillway (wasteway), controlled by 4 feet of flashboards, located about 2 miles upstream of the Swift No. 2 powerhouse, which discharges into a spillway channel to the Lewis River bypassed reach less than 2 miles upstream of Yale Lake. A concrete intake with two penstocks delivers water to the powerhouse containing two turbine generators with a total generating capacity of 66.8 MW and maximum hydraulic capacity of 9,000 cubic feet per second (cfs). Water from the powerhouse is released into the tailrace and then discharged into Yale Lake. The primary line for the Swift No. 2 Project includes two sets of three 13.8-kV transmission lines conveying power from the Swift No. 2 powerhouse to the Swift No. 2 substation. A surge arresting structure located adjacent to the powerhouse was constructed during project reconstruction to reduce hydraulic transients (wave run-up) in the power canal.

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<sup>11</sup> A section of the Swift No. 2 power canal failed on April 21, 2002, and was reconstructed; the project recommenced operation on June 2, 2006.

13. The Swift No. 2 project boundary includes the Swift No. 2 power canal, spillway, powerhouse, tailrace, primary transmission line, and substation, applicant-owned lands around the canal and powerhouse, and approximately 3.79 acres of Forest Service lands associated with Forest Road 90. The bypassed reach of the Lewis River is not included in the project boundary.

14. Operation of Swift No. 2 is dependant upon water releases from the Swift No. 1 Project to the Swift No. 2 canal; therefore, the two facilities operate in tandem. Canal operating levels range from a maximum of 604 feet above mean sea level (msl) to a minimum of 601 feet msl, at the normal range of operating flows of about 9,000 cfs to less than 2,000 cfs. Releases from the Swift No. 2 powerhouse enter Yale Lake, while power canal spills can be released through the upstream canal overflow spillway (wasteway) into the approximately 3-mile-long Lewis River bypassed reach about 1 mile downstream of the Swift No. 1 powerhouse. Between elevation 490 feet msl (full pool) and about elevation 478 feet msl, Yale Lake influences the Swift No. 2 tailrace elevation. Below about elevation 478 feet msl, the tailrace channel is exposed and all flows are carried within the limits of the channel. The Swift No. 2 Project provides peaking capacity and has no flood management capability, function, or responsibility.

#### **SECTION 4(e) CONDITIONS**

15. The project is located partially within the Gifford Pinchot National Forest. Section 4(e) of the FPA,<sup>12</sup> provides that the Commission may issue a license for a project located within any reservation<sup>13</sup> only if it finds that the license will not interfere or be inconsistent with the purpose for which the reservation was created or acquired. I have reviewed the Organic Administration Act of 1897,<sup>14</sup> which established the purposes for forest reservations, and the presidential proclamations that created and expanded the

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<sup>12</sup> 16 U.S.C. § 797(e) (2000).

<sup>13</sup> Defined at FPA section 3(2), 16 U.S.C. § 794(2) (2000).

<sup>14</sup> 16 U.S.C. § 473 (2000) *et seq.*

Gifford Pinchot National Forest.<sup>15</sup> There is no evidence or allegation in this proceeding to indicate that relicensing of the Swift No. 2 Project would interfere with the purposes of the Gifford Pinchot National Forest. Therefore, I find that this license will not interfere or be inconsistent with the purposes for which the Gifford Pinchot National Forest was created.

16. FPA section 4(e) further requires that Commission licenses for projects located within federal reservations must include all conditions that the Secretary of the department under whose supervision such reservation falls shall deem necessary for the adequate protection and utilization of such reservation.

17. On February 4, 2005, the U.S. Department of Agriculture, Forest Service, filed preliminary terms and conditions under FPA section 4(e) for the national forest lands and waters. On November 22, 2005, the Forest Service filed its modified 4(e) conditions. The modified 4(e) conditions are set forth in Appendix A of this order and incorporated into this license by Ordering Paragraph (D) and summarized below.<sup>16</sup>

18. The Forest Service provided a reservation of authority to modify conditions plus the following eleven conditions that require the licensee to: (1) comply with the Agreement, as set forth in conditions 2 through 11; (2) convene a terrestrial coordination committee and aquatic coordination committee; (3) acquire authorization for activities on Forest Service lands outside the project boundary; (4) implement the Cultural Resources Unanticipated Discovery Plan (heritage resource protection); (5) implement aquatic

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<sup>15</sup> The Mount Rainier Forest Reserve was created on February 22, 1897 by presidential proclamation, 29 Stat. 896. On July 8, 1908, Executive Order 820 established the Columbia National Forest from portions of the Mount Rainer Forest Reserve. On June 15, 1949, the name was changed to honor Gifford Pinchot, the first Chief of the National Forest Service, Proc. 2845, 63 Stat 1277. At the time, the Organic Administration Act of 1897, 16 U.S.C. § 475, stipulated that all national forest lands were established and administered only for watershed protection and timber production. These are the only purposes that are relevant for a Commission determination under section 4(e) as to whether a project will interfere or be inconsistent with the purpose for which the reservation (National Forest) was created or acquired. See *Rainsong Company v. FERC*, 106 F.3d 269 (9<sup>th</sup> Cir. 1997).

<sup>16</sup> The Forest Service also required as a general condition the inclusion of the license articles of the Commission's Standard Form L-1 (Terms and Conditions of License for Constructed Major Project Affecting Lands of the United States) issued by Order No. 540, dated October 31, 1975. The conditions of Standard Form L-1 are included by Ordering Paragraph (J), as this existing major project affects lands of the United States.

monitoring and evaluation plans; (6) provide public information to protect bull trout; (7) fund and implement an aquatics fund; (8) establish juvenile salmonid acclimation sites; (9) fund dispersed shoreline camping management; (10) coordinate with the Forest Service on recreation measures; and (11) fund Forest Road 90 maintenance.

19. In the EIS, staff did not recommend the funding for maintenance of dispersed camping, required by Forest Service condition 9, because many of these sites may not be well known or mapped in any way or have no direct nexus to the project. This condition requires Cowlitz PUD to provide \$780 in 2004 dollars annually (adjusted for inflation) to the Forest Service to manage project-related dispersed camping on National Forest System lands. Staff concluded in the EIS<sup>17</sup> that proposed campground improvements at the nearby Swift No. 1 Project and provisions for construction of additional campgrounds, as needed, are sufficient to address camping during peak-use periods and; therefore, annual funding contributions to the Forest Service are not needed. However, I have included this measure as part of the license because it is a mandatory section 4(e) condition (Appendix A).

20. Staff also did not recommend the funding of maintenance of Forest Road 90, required by Forest Service condition 11, because of the lack of nexus with the project. As outlined in section 13.2.2 of the Agreement, Cowlitz PUD has agreed to make payments to the Forest Service for the maintenance of the section of Forest Road 90 between the Skamania-Cowlitz County line and milepost 16.2 near the Northwoods Community. Cowlitz PUD also proposes to meet with the Forest Service and pay appropriate use fees to the Forest Service on a case-by-case basis for its use of Forest Road 90 to haul heavy loads. Staff notes in the EIS<sup>18</sup> that Forest Road 90 is a multi-purpose road with many more uses than project access. Given that the road is primarily used for non-project purposes, Staff concluded that this road is not considered a project facility, and therefore applicant funding for maintenance of the road is not appropriate. Although I do not include this road within the project boundary, because this is a mandatory section 4(e) condition, I include the measure as part of the license (Appendix A).

## **WATER QUALITY CERTIFICATION**

21. Under section 401(a)(1) of the Clean Water Act (CWA),<sup>19</sup> the Commission may not issue a license for a hydroelectric project unless the state water quality certifying agency has issued water quality certification for the project or has waived certification by

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<sup>17</sup> See EIS at 3-171.

<sup>18</sup> Id. at 5-34 to 5-35.

<sup>19</sup> 33 U.S.C. § 1341(a)(1) (2000).

failing to act within a reasonable period of time, not to exceed 1 year. Section 401(d) of the CWA provides that state certification shall become a condition of any federal license that authorizes construction or operation of the project.<sup>20</sup>

22. On February 2, 2005, Cowlitz PUD applied to Washington Ecology for water quality certification. Cowlitz PUD subsequently withdrew and refiled its application on December 2, 2005. On October 26, 2006, Washington Ecology issued the certification. Pursuant to Section 4.1(9) of the water quality certification,<sup>21</sup> Washington Ecology issued amendments on December 21, 2007 and January 17, 2008.<sup>22</sup>

23. The conditions of the certification include general requirements: (1) compliance with all state water quality standards approved by the EPA; (2) compliance with sediment quality standards; (3) prohibition of discharge of any solid or liquid waste to the waters of Washington; and (4) reservation of Washington Ecology's authority.

24. The certification also includes specific conditions: (1) release specified instream flows and provide habitat; (2) maintain specified total dissolved gas levels; (3) maintain specified temperature and dissolved oxygen levels; (4) implement measures to protect water quality during construction projects, miscellaneous discharges, and habitat modifications; (5) implement oil spill prevention and control measures; (6) implement measures to protect water quality during pesticide applications; and (7) implement monitoring and reporting measures.

25. The certification is consistent with the Agreement except Ecology will not allow the licensees, at their discretion, to stop releases through the Upper Release Point in the vicinity of the Swift No. 1 powerhouse during the time that spills displace scheduled

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<sup>20</sup> 33 U.S.C. § 1341(d) (2000).

<sup>21</sup> Ecology reserves the right to amend this certification if it determines that the provisions are no longer adequate to provide reasonable assurance of compliance with applicable water quality standards or other appropriate requirements of state law.

<sup>22</sup> Washington Ecology replaced three of the conditions of the certification dealing with oil spill prevention and control (conditions 4.6.3.e, 4.6.4.e, and 4.6.5.a). The revisions require that the oil-water separator be sized to accommodate inflows up to the total volume of the largest transformer plus 15 percent and that the transformer containment area will contain spills from the volume of the largest transformer plus 15 percent. With regard to the sumps, the revision requires that the oil sensors be calibrated and maintained to detect oil at 15 parts per million or less.



releases from the Upper Release Point into the Lewis River bypassed reach (section 6.1.5.a of the Agreement).<sup>23</sup>

26. The water quality certification conditions are attached as Appendix B to this order. Ordering Paragraph (E) incorporates the certification conditions of Appendix B as conditions of the license.

## **SECTION 18 FISHWAY PRESCRIPTION**

27. Section 18 of the FPA<sup>24</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, as appropriate.

28. Both Commerce and Interior filed modified fishway prescriptions (Commerce filed on February 17, 2006, and Interior filed on February 22, 2006). Both prescriptions involve passage of anadromous salmon and steelhead species, while FWS's prescriptions also involve bull trout. Both agencies state that these prescriptions are consistent with the Agreement.

29. The fishway prescriptions include structures for downstream passage past the project, project operations, performance standards, outcome goals, and other measures to ensure effective passage. By the 17<sup>th</sup> anniversary of the Swift licenses, PacifiCorp and Cowlitz PUD would construct and begin operating an adult trap and transport facility at the single best site located at the upstream end of Yale Lake. The FWS' prescriptions also include measures for the collection and hauling of bull trout. Cowlitz PUD would implement the measures together with PacifiCorp.

30. The Commerce section 18 prescription is attached as Appendix C to this order and the Interior prescription is attached as Appendix D. Ordering Paragraphs (F) and (G) incorporate the Commerce and Interior prescriptions, respectively, as conditions of the license.

31. Both agencies also reserve their rights under Section 18 of the FPA to modify the fishway prescriptions based upon significant new information and conclusions developed in connection with the fulfillment of other statutory consultation and review requirements. Consistent with Commission policy, Article 408 of this license reserves the Commission's authority to require fishways that may be prescribed by Interior or Commerce for the Swift No. 2 Project.

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<sup>23</sup> See section 4.2(5) of the certification.

<sup>24</sup> 16 U.S.C. § 811 (2000).

## THREATENED AND ENDANGERED SPECIES

32. Section 7(a)(2) of the Endangered Species Act (ESA) of 1973,<sup>25</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. The draft EIS evaluated effects of the project on listed species and served as our biological assessment (BA). Staff's conclusions with regards to threatened and endangered species and the measures included in the Biological Opinions (BOs) issued by NMFS and FWS are outlined in the Master Order.

33. On September 30, 2005, Staff requested formal consultation with NMFS on the listed salmon and steelhead species. NMFS issued a BO on August 27, 2007, which contains four incidental take terms and conditions that require the licensee to: (1) comply with the provisions of the Agreement that relate to anadromous fish (specifically, sections 3, 4, 5, 7, 8, and 9 of the Agreement); (2) for all construction activities, implement measures to control sediment and minimize other potential effects on salmonids; (3) implement monitoring and evaluation measures contained in the Agreement; and (4) report any dead or injured steelhead that are discovered. These terms and conditions are contained in Appendix E of this order, and incorporated into this license by Ordering Paragraph (H), with the exception of section 6.1.5.a of the Agreement (flows through the upper release point during spill flows) prohibited by the mandatory water quality certification, as discussed above. The absence of this measure will not minimize the protection of listed species.

34. Staff requested consultation with FWS on September 30, 2005. FWS issued a BO for bull trout, bald eagle, and northern spotted owl on September 15, 2006. The BO contains five incidental take terms and conditions related to bull trout that require the licensee to: (1) minimize coho redd superimposition on bull trout; (2) conduct annual bull trout surveys; (3) implement procedures for transporting fish to minimize predation; (4) follow instream construction timing; and (5) implement measures for monitoring and handling bull trout. These terms and conditions are provided in Appendix F of this order and incorporated by Ordering Paragraph (I).

## ESSENTIAL FISH HABITAT

35. Section 305(b)(2) of the Magnuson-Stevens Fishery Conservation and Management Act<sup>26</sup> requires federal agencies to consult with the Secretary of Commerce regarding any action or proposed action authorized, funded, or undertaken by the agency

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<sup>25</sup> 16 U.S.C. § 1536(a) (2000).

<sup>26</sup> 16 U.S.C. § 1855(b)(2) (2000).

that may adversely affect Essential Fish Habitat (EFH) identified under the Act. Under section 305(b)(4)(A)<sup>27</sup> of the Magnuson-Stevens Act, NMFS is required to provide EFH Conservation Recommendations for actions that would adversely affect EFH. Under section 305(b)(4)(B) of the Act,<sup>28</sup> 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>29</sup>

36. The Pacific Fisheries Management Council has designated EFH for the following federally managed Pacific salmon: Chinook, coho, and Puget Sound pink salmon. Freshwater EFH for these Pacific salmon includes all streams, lakes, ponds, wetlands, and other water bodies currently or historically accessible to salmon in Washington, Oregon, Idaho, and California, except areas upstream of certain impassable artificial (man-made) barriers, and longstanding naturally impassable barriers. The Lewis River Basin comprises EFH for Chinook and coho salmon.

37. Staff concluded in the EIS that relicensing the projects as proposed by the applicants would continue to have an adverse effect on Chinook and coho EFH, but that elements of the proposed action, such as improvements to upstream and downstream passage, would reduce these effects over current conditions.

38. NMFS included an analysis of effects on EFH in its BO for the four projects provided in response to the Commission's September 30, 2005 request to initiate formal consultation under the ESA. In the BO, dated August 27, 2007, NMFS concluded that the proposed action would adversely affect designated EFH for Pacific coast salmon. NMFS adopted the terms and conditions of the BO's incidental take statement (discussed above) as conservation measures to minimize the effects on EFH. NMFS' conservation measures are included in this license in accordance with the terms and conditions of the NMFS BO by virtue of the terms and conditions of the NMFS BO (see Appendix E of this order).

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<sup>27</sup> 16 U.S.C. § 1855(b)(4)(A) (2000).

<sup>28</sup> 16 U.S.C. § 1855(b)(4)(B) (2000).

<sup>29</sup> 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.

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

39. In 1980, Congress enacted the Pacific Northwest Electric Power Planning and Conservation Act (Northwest Power Act).<sup>30</sup> This act created the Northwest Power 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 Program is 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>31</sup> Section 4(h)(11)(A) of the Northwest Power Act<sup>32</sup> 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."

40. 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). The provisions of the Agreement required by this license, including anadromous fish reintroduction and passage measures (sections 3 and 4), flow releases (section 6), aquatic habitat enhancement (section 7), hatchery and supplementation program (section 8), and wildlife land acquisition and management (section 10) are consistent with applicable provisions of the Program, as discussed in more detail in the EIS.<sup>33</sup> 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 Swift No. 2 Project is not located within a protected area designated under Appendix B of the Program. Further, Article 409 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.

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<sup>30</sup> 16 U.S.C. §§ 839(b) (2000) *et seq.*

<sup>31</sup> 16 U.S.C. § 839b(h)(5) (2000).

<sup>32</sup> 16 U.S.C. § 839(h)(11)(A) (2000).

<sup>33</sup> *See* EIS at 5-23 to 5-31.

## NATIONAL HISTORIC PRESERVATION ACT

41. Under section 106 of the National Historic Preservation Act (NHPA),<sup>34</sup> and its implementing regulations,<sup>35</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 State Historic Preservation Officer (SHPO) to determine whether and how a proposed action may affect historic properties, and to seek ways to avoid or minimize any adverse effects.

42. No historic properties associated with the Swift No. 2 Project were identified. As a result, a programmatic agreement was not executed for this particular project. Nonetheless, consistent with the section 13.1.2.1 of the Agreement, Article 406 requires Cowlitz PUD to implement its Cultural Resources Unanticipated Discovery Plan and take appropriate measures for any unanticipated discovery that might occur in the Swift No. 2 Project boundary. Furthermore, Article 407 will allow tribal access to lands within the Swift No. 2 Project boundary for traditional cultural practices.

## RECOMMENDATIONS OF FEDERAL AND STATE FISH AND WILDLIFE AGENCIES

### A. Recommendations Pursuant to Section 10(j) of the FPA

43. Section 10(j)(1) of the FPA,<sup>36</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>37</sup> to "adequately and equitably protect, mitigate damages to, and enhance fish and wildlife (including related spawning grounds and habitat)" affected by the project.

44. In response to the Commission's notice that the projects were ready for environmental analysis (dated December 9, 2004), NMFS, Interior, and Washington Fish and Wildlife filed letters of comment that included section 10(j) recommendations.<sup>38</sup>

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<sup>34</sup> 16 U.S.C. § 470 (2000) *et seq.*

<sup>35</sup> 36 C.F.R. Part 800 (2007).

<sup>36</sup> 16 U.S.C. § 803(j)(1) (2000).

<sup>37</sup> 16 U.S.C. §§ 661 (2000) *et seq.*

<sup>38</sup> These letters were dated February 3, 4, and 7, 2005, respectively.

These agencies are also parties to the Agreement.<sup>39</sup> In their letters containing their 10(j) recommendations, these agencies recommended that the Commission approve the Agreement and all the provisions thereof. Two recommendations relevant to the Swift No. 2 Project were determined to be outside the scope of section 10(j) and are discussed in the next section. The remaining 10(j) recommendations that were provisions of the Agreement are consistent with the section 4(e) conditions, fishway prescriptions, water quality certification conditions, and BO terms and conditions and are therefore incorporated into the license. As a result, this license includes conditions consistent with the recommendations that are within the scope of section 10(j).

### **B. Recommendations Pursuant to Section 10(a)(1) of the FPA**

45. The agencies made recommendations that are not specific measures to protect, mitigate damages to, or enhance fish and wildlife. Consequently, I do not consider these recommendations under section 10(j) of the FPA. Instead, I consider these recommendations under the broad public-interest standard of FPA section 10(a)(1).<sup>40</sup>

46. Staff did not recommend in the draft EIS two measures relevant to the Swift No. 2 Project that are outside the scope of section 10(j). These include: (1) certain measures to be funded by the Aquatics Fund; and (2) funding to the Forest Service for management of dispersed camping sites outside the project boundaries.

47. The Aquatics Fund is not within the scope of section 10(j), in that the fishery measures lack specificity. The fund is proposed to benefit fish recovery throughout the North Fork Lewis River, with priority to federal ESA-listed species; support the reintroduction of anadromous fish throughout the basin; and enhance fish habitat in the Lewis River Basin, with priority given to the North Fork Lewis River. While benefits of the fund will most likely extend to the enhancement, protection, and restoration of aquatic habitat and other resources affected by the project, it is not certain that funds would be used solely for measures that provide a demonstrated benefit to resources affected by project structures and operations.<sup>41</sup> To ensure that the fund achieves the

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<sup>39</sup> The Agreement was filed with the Commission on December 3, 2004.

<sup>40</sup> 16 U.S.C. § 803(a)(1) (2000). Section 10(a)(1) 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.

<sup>41</sup> See EIS, section 5.1.5.

objectives listed under section 7.5 of the Agreement and have a project nexus, I will require that the strategic plan that will guide resource project development and the annual report describing proposed resource projects be filed with the Commission for approval (Article 401) after the plan is approved by the Aquatic Coordination Committee (ACC).<sup>42</sup> I include the Aquatics Fund because it would provide substantial benefits to resources affected by the project (Appendix B, condition 7).

48. Funding for management of non-project dispersed camping sites is not within the scope of section 10(j) in that it is not a recommendation related to fish and wildlife resources. I, however, include funds for management of dispersed recreation because they are required by Forest Service condition 9, as discussed above, even though staff found the funding unnecessary.

## **OTHER ISSUES**

### **A. Fisheries and Aquatic Resources**

49. Many of the fisheries and aquatic resources plans required by the mandatory section 4(e) conditions and NMFS and FWS fishway prescriptions, or conditions of the NMFS BO do not require Commission approval. Article 401(a) requires that PacifiCorp file the following plans or designs for Commission approval before implementation: upstream transport plan, bull trout collection and transport program, habitat preparation plan, aquatics fund strategic plan, hatchery and supplementation plan and operating plan, and monitoring and evaluation plan.

50. Several water quality certification conditions, section 4(e) conditions, and BO conditions contemplate changes to project operations or facilities over the course of the new license as a result of studies or changed circumstances. Because the comprehensive development standard of FPA section 10(a)(1) continues to govern regulation of a project throughout the term of the license,<sup>43</sup> it is the Commission's responsibility to give prior approval, through appropriate license amendments, for all material changes to the project and its maintenance and operation.<sup>44</sup> Article 401(b) identifies these conditions and requires Commission approval of these changes before they may be implemented.

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<sup>42</sup> The ACC and Terrestrial Coordination Council (TCC) are made up of representatives from the Agreement signatories, as outlined above.

<sup>43</sup> See, e.g., *S.D. Warren Co.*, 68 FERC ¶ 61,213 at p. 62,022 (1994).

<sup>44</sup> The Commission's regulations, as well as the terms of the license and basic due process principles, govern what types of alterations require what sorts of submittals or public notice. A license article can not provide for automatic amendment of the license based on future occurrences. Rather, the licensee is free to file with the Commission for

51. Section 6.1 of the Agreement requires Cowlitz PUD to provide minimum flows that would result in improved aquatic habitat in the bypassed reach for the listed bull trout and anadromous salmonids once they are reintroduced to the reach as part of previously discussed measures. The section 401 water quality certification requires a specific flow release regime for the bypassed reach that is more detailed than the approach in the Agreement, which requires an interim flow, and then development of a permanent flow regime in consultation with the ACC. The flow regime included in the section 401 water quality certification conditions, however, is within the bounds of the flows included in the Agreement, and also results in the same total volume of flow released on an annual basis.<sup>45</sup> Further, the certification allows the alteration of the flow schedule upon mutual agreement between Washington Ecology and the licensee based on the adaptive management process (section 6.1.4.c of the Agreement). I note that any changes to the flow regime would require prior Commission approval.

52. Cowlitz PUD also proposes to continue the following aquatic resources measures: (1) net bull trout from the Swift No. 2 tailrace, and haul to a location defined by FWS using NMFS and FWS facility and handling guidelines for anadromous fish and bull trout; (2) partially fund operation of Speelyai Hatchery; and (3) manage the Devil's Backbone Conservation Covenant to benefit bull trout (section 5.2 of the Agreement). These measures would ensure the maintenance and restoration of anadromous fish species and the federally listed bull trout, and are required by Article 402.

## **B. Wildlife Resources**

53. Cowlitz PUD proposes to develop and implement a Wildlife Habitat Management Plan (Habitat Plan) on various lands as provided for in section 10.8 of the Agreement. The Habitat Plan would direct how project lands and Cowlitz PUD-owned lands would be managed over the next license periods for the benefit of wildlife species and their habitat. The lands covered by the Habitat Plan include: (1) 283 acres on the south-facing slope of Swift reservoir known as the Devil's Backbone (195.95-acre Devil's Backbone Wildlife Lands and 87.79-acre Devil's Backbone Conservation Covenant Lands); and (2) all other Cowlitz PUD-owned lands within the Swift No. 2 Project boundary and related to the operation of the project, except as provided in Exhibit B of the Agreement. The general wildlife objectives are outlined in schedule 10.8, *Wildlife Objectives*, of the Agreement.

54. Implementation of the Habitat Plan would offset habitat impacts and associated wildlife losses resulting from continued operation of the project by enhancing the quality of wildlife habitat within and adjacent to the project boundary, benefiting many wildlife

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an amendment of its license, if future conditions warrant.

<sup>45</sup> See EIS, section 5.1.5.



species. Article 403 requires Cowlitz PUD to file a Habitat Plan for Commission approval within 6 months from the date of issuance of this license and any future modifications to the Habitat Plan. Article 403 also requires the licensee to file annual plans outlining the proposed wildlife measures and costs and showing the benefits to resources affected by project structures or operations. The annual plans shall explain the consistency with wildlife objectives outlined in the Settlement Agreement. The Devil's Backbone Conservation Covenant Lands are included in the project boundary. Article 203 requires that the Devil's Backbone Wildlife Lands managed under the Habitat Plan also be included in the project boundary.

55. Cowlitz PUD also proposes to continue the following wildlife measures: (1) buffer sensitive aquatic and terrestrial habitat from ground-disturbing activities (e.g., timber harvest, construction); (2) maintain existing road closures through sensitive habitat areas by installing and maintaining gates; (3) develop and implement measures to maintain existing aquatic connectivity and control runoff and erosion from roads through Cowlitz PUD lands on Devil's Backbone; and (4) implement best management practices to protect sensitive species and habitats during construction activities. These measures would benefit wildlife resources in the project area and are required by Article 404.

### **C. Recreation Resources**

56. As outlined in sections 11.3.1 and 11.3.2 of the Agreement, Cowlitz PUD would provide an American with Disabilities Act-compliant bank fishing facility at the Swift No. 2 canal bridge, a parking area to accommodate thirteen vehicles, and at least one portable toilet seasonally. In addition, Forest Service 4(e) condition no. 10 requires Cowlitz PUD to operate, maintain, and replace, as needed, the fishing facility and associated parking and portable toilets. Constructing a barrier-free bank fishing facility would improve access to the project and help address growing recreational demand.<sup>46</sup> The construction of these facilities is required by Article 405.

## **ADMINISTRATIVE PROVISIONS**

### **A. Annual Charges**

57. The Commission collects annual charges from licensees for administration of the FPA and for the use, occupancy and enjoyment of federal lands. Article 201 provides for the collection of funds for administration of the FPA and for recompensing the United States for the use of its lands.

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<sup>46</sup> *Id.* at 3-157.

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

58. The Commission requires licensees to file sets of approved project drawings on microfilm and in electronic file format. Article 202 requires the filing of these drawings.

59. Cowlitz PUD's Exhibit G (project boundary) maps for relicensing do not include the entire Devil's Backbone Conservation Area owned by Cowlitz PUD and to be managed under the Habitat Plan. Article 203 requires the Cowlitz PUD to revise Exhibit G to include the 195.95-acre Devil's Backbone Wildlife Lands within the project boundary.

## **C. Headwater Benefits**

60. Some projects directly benefit from headwater improvements that were constructed by other licensees, by the United States, or by permittees. Article 204 requires the licensee to reimburse such entities for these benefits if they were not previously assessed and reimbursed.

## **D. Modified Project Facilities**

61. Article 301 requires the licensee to file revised Exhibit A, F, and G drawings, as applicable, upon the completion of all construction/removal activities authorized by this license, to describe and show those project facilities as built.

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

62. Requiring a licensee to obtain prior Commission approval for every use or occupancy of the project would be unduly burdensome. Therefore, Article 410, the standard land use article, 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.

## **STATE AND FEDERAL COMPREHENSIVE PLANS**

63. Section 10(a)(2) of the FPA<sup>47</sup> requires the Commission to consider the extent to which a project is consistent with federal or state comprehensive plans for improving, developing, or conserving a waterway or waterways affected by the project.<sup>48</sup> Under

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<sup>47</sup> 16 U.S.C. § 803(a)(2)(A) (2000).

<sup>48</sup> Comprehensive plans for this purpose are defined at 18 C.F.R. § 2.19 (2007).

section 10(a)(2)(A), federal and state agencies filed 73 comprehensive plans that address various resources in Washington. Of these, the staff identified and reviewed 11 comprehensive plans<sup>49</sup> that are relevant to this project. No conflicts were found.

## **APPLICANT'S PLANS AND CAPABILITIES FOR THE SWIFT NO. 2 PROJECT**

64. In accordance with sections 10(a)(2)(c) and 15(a) of the FPA,<sup>50</sup> Commission staff evaluated Cowlitz PUD's record as a licensee with respect to the following: (A) conservation efforts; (B) compliance history and ability to comply with the new license; (C) safe management, operation, and maintenance of the project; (D) ability to provide efficient and reliable electric service; (E) need for power; (F) transmission service; (G) cost effectiveness of plans; and (H) actions affecting the public. I agree with staff's findings in each of the following areas.

### **A. Conservation Efforts**

65. Cowlitz PUD uses demand-side management programs to encourage customers to practice conservation. Cowlitz PUD has developed eight energy conservation programs to help meet electrical power requirements. The energy conservation programs are: (1) Weatherwise: customers receive an incentive payment for a portion of the cost of insulating their electrically heated home or installing energy efficient windows; (2) EnergySHARE: rebates for purchasing energy efficient appliances; (3) H<sup>2</sup> Advantage: Homeowners are provided rebates to upgrade their electric heating system with the installation of a premium heat pump system; (4) CEEP: nonresidential customers are given rebates for making improvements to inefficient lighting systems; (5) EnergySPICE: incentives are offered to industrial manufactures for the development of electrical energy savings in their industrial process; (6) EnergySPICE Motor Rebates: commercial and industrial customers may receive funding to encourage the purchase of premium efficiency motors; (7) NEEA: provides funding for enhancing market transformation of energy conservation measures in the residential, commercial and industrial sectors; and (8) Lower Columbia Community Action Council: provides funding for low-income energy conservation projects. Staff concludes that Cowlitz PUD is making a good faith effort to conserve electricity and promote energy conservation by its customers.

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<sup>49</sup> The list of applicable plans can be found in Section 5.4 of the EIS at 5-40 to 5-41.

<sup>50</sup> 16 U.S.C. §§ 803(a)(2)(C) and 808(a) (2000).

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

66. Commission staff reviewed Cowlitz PUD's compliance with the terms and conditions of the existing license. Staff finds that Cowlitz PUD's overall record of making timely filings and compliance with its license is satisfactory. Thus, Cowlitz PUD has or can acquire the resources and expertise necessary to carry out its plans and comply with all articles and terms and conditions of a new license.

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

67. Commission staff reviewed Cowlitz PUD's management, operation, and maintenance of the Swift No. 2 Project pursuant to the requirements of 18 C.F.R. Part 12 (2007) and the Commission's Engineering Guidelines and periodic Independent Consultant's Safety Inspection Reports. Staff concludes that the project works are safe, and that there is no reason to believe that Cowlitz PUD cannot continue to safely manage, operate, and maintain these facilities under a new license.

68. Cowlitz PUD maintains a current Emergency Action Plan (EAP) for the Swift No. 2 Project in the event an emergency situation may occur. The primary purpose of the EAP is to provide early warning to people in the event of an emergency. The plan is updated annually and provides guidelines for contacting local and FERC officials. The current EAP was approved by FERC on April 25, 2007.

69. On April 21, 2002, a section of the canal embankment failed over a few hours without any warning. Water from the canal drained into Yale reservoir. Damage occurred to Swift No. 2 powerhouse, tailrace, switchyard and State Route 503. Cowlitz PUD immediately implemented the EAP and emergency crews were quickly on hand. Cowlitz PUD worked closely with PacifiCorp (the upstream licensee) and state and local agencies to secure the site and start repairing the damage. Cowlitz PUD successfully implemented the EAP for the project. The project was placed back in service on June 2, 2006.

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

70. Staff reviewed Cowlitz PUD's plans and its ability to operate and maintain the project in a manner most likely to provide efficient and reliable electric service. Based on review of the information, Cowlitz PUD will operate the project in an efficient manner within the constraints of the license and that the project will continue to provide efficient and reliable electric service in the future.

## **E. Need for Power**

71. Cowlitz PUD is a not-for-profit, customer-owned utility in southwestern Washington providing electricity to more than 48,100 residential, commercial, industrial,

and street lighting customers. Cowlitz PUD serves a 1,150-square-mile county with a population of more than 94,000.

72. Under the terms of this license, the Swift No. 2 Project will generate an average of 215,938 megawatt hours (MWh) of electric energy per year which will be used to meet the electrical demand of its customers. The 66.8-MW Swift No. 2 Project is Cowlitz PUD's only owned generating resource. Cowlitz PUD applies all of its Swift No. 2 power to its load; and pursuant to its Partial Requirements Contract with the Bonneville Power Administration (BPA), none may be sold into the market until at least 2011.

73. Cowlitz PUD's total power supply comes from three primary sources. Approximately 5 percent comes from Swift No. 2, close to 90 percent from BPA (although the amount has varied somewhat over the last few years), and approximately 5 percent from a contractual share of Grant County PUD's mid-Columbia projects.

74. The project is located in the Northwest Power Pool Area (NWPP) of the Western Electricity Coordinating Council (WECC) region of the North American Electric Reliability Council. The peak demand requirements for the NWPP area are projected to grow at an average annual compound rate of 1.5 percent.<sup>51</sup>

75. Based on the above projections, the power from the Swift No. 2 Project would continue to be useful in meeting local as well as part of the regional need for power. The project would continue to displace some of the fossil-fueled electric power generation the regional utilities now use, and thereby conserve nonrenewable resources and reduce the emission of noxious byproducts caused by the combustion of fossil fuels.

#### **F. Transmission Services**

76. The project's transmission facilities that are required to be licensed include the two sets of three 13.8-kV transmission lines conveying power from the Swift No. 2 powerhouse to the Swift No. 2 substation. Cowlitz PUD proposes no changes that would affect transmission facilities.

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

77. Cowlitz PUD has no plans for changing project facilities or operations for power development purposes, but is proposing a number of measures for the enhancement of natural resources and recreational opportunities. Staff concludes, based on the license

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<sup>51</sup> 2007 Long-Term Reliability Assessment 2007-2016 to ensure the reliability of the bulk power system. North American Electric Reliability Corporation. Princeton, NJ. October 2007.

applications, that Cowlitz PUD's plans for implementing these measures, as well as its continued operation of the project, will be achieved in a cost-effective manner.

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

78. In its license application, Cowlitz PUD cited numerous examples of actions it has taken that affect the public, including: delivering low cost electricity that help economic development in Cowlitz County, making the Swift No. 2 canal available for Kids Fishing Day sponsored by the Forest Service, assisting customers in conserving electricity, providing funding for Speelyai Hatchery, and providing for electrical safety programs and messages at schools, community events and children's programming. Cowlitz PUD uses the project to help meet local power needs.

## **PROJECT ECONOMICS**

79. 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>52</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.

80. In applying this analysis to the Swift No. 2 Project, I considered two options: Cowlitz PUD's proposed action (the project as proposed by Cowlitz PUD in accordance with the Agreement) and Cowlitz PUD's proposed action with staff modifications and mandatory measures (the project as licensed herein). Under the proposed action, the levelized annual cost of operating the project is about \$6,779,000 or \$31.40/MWh. The Swift No. 2 Project would generate about 215,938 MWh of energy annually. When we multiply our estimate of average annual generation by the alternative power cost of \$48.55/MWh,<sup>53</sup> we get a total value of the project's power of \$10,484,000. To determine whether the project is currently economically beneficial, we subtract the project costs from the value of the project's power. Therefore, the project would cost \$3,704,000 or \$17.16/MWh less than the likely alternative cost of power.

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<sup>52</sup> 72 FERC ¶ 61,027 (1995).

<sup>53</sup> Power value estimates are based on PacifiCorp's December 1, 2006 filing used in the preparation of the November 2007 Final Environmental Analysis for the Klamath Hydroelectric Project No. 2082.

81. As proposed by Cowlitz PUD and licensed herein with Agreement and staff measures and mandatory measures, the levelized annual cost of operating the project would be about \$6,779,000 or about \$31.39/MWh. Based on an estimated average generation of 215,938 MWh, the project would produce power valued at \$10,484,000 when multiplied by the \$48.55/MWh value of the project's power. Therefore, in the first year of operation the project power would cost \$3,705,000 or \$17.16/MWh less than the likely cost of alternative power.

82. In analyzing public interest factors, the Commission takes into account that hydroelectric projects offer unique operational benefits to the electric utility system (ancillary benefits). For projects with useable water storage, these benefits include their value as almost instantaneous load-following response to dampen voltage and frequency instability on the transmission system, system-power-factor-correction through condensing operations, and a source of power available to help in quickly putting fossil-fuel based generating stations back on line following a major utility system or regional blackout. The Swift No. 2 Project will continue to provide a broad range of ancillary service benefits to the region.

## **COMPREHENSIVE DEVELOPMENT**

83. Sections 4(e) and 10(a)(1) of the FPA<sup>54</sup> require the Commission to give equal consideration to the 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.

84. The EIS for the Swift No. 2 Project contains the background information, analysis of effects, and support for related license requirements.

85. Based on our independent review and evaluation of the project, recommendations from the resource agencies and other stakeholders, and the no-action alternative, as documented in the EIS, I have selected the proposed Swift No. 2 Project as proposed by Cowlitz PUD and licensed herein with Agreement and staff measures and find that it is best adapted to a comprehensive plan for improving and developing the Lewis River.

86. 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,

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<sup>54</sup> 16 U.S.C. §§ 797(e) and 803(a)(1) (2000).

water quality, recreation resources, and historic properties; and (3) the 66.8 MW of electric energy generated from a renewable resource will continue to offset the use of fossil-fueled, steam-generating electric generating plants, thereby conserving nonrenewable energy resources and reducing atmospheric pollution.

## LICENSE TERM

87. Pursuant to Section 15(e) of the FPA, 16 U.S.C. § 808 (e), relicense terms shall not be less than 30 years nor more than 50 years from the date on which the license is issued. The Commission's general policy is to establish 30, 40, or 50-year terms for projects with, respectively, little, moderate, or extensive redevelopment, new construction, new capacity, or additional environmental measures.<sup>55</sup> 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 relicense proceedings can also be coordinated.<sup>56</sup>

88. The amount of proposed new investment in environmental measures at the Swift No. 2 Project is relatively modest. Our policy would be to issue a license for either 30 or 40 years. However, to establish the license term for the Swift No. 2 Project, account must be given to the fact that it is one unit of the Lewis River System that is an integrated operation consisting of four powerhouses, three reservoirs, three fish hatcheries, conveyance facilities, access roads and transmission facilities authorized under four Commission licenses, all of which are operated together as best adapted to a comprehensive plan for improving or developing the waterway.

89. In order to facilitate the Commission's future coordinated treatment of the Swift No. 2 Project and the three other Lewis River Projects, the expiration date for the Swift No. 2 Project should coincide with the expiration dates for the other three projects in the Lewis River System. I will, therefore, issue the license for the Swift No. 2 Project for a term of 50 years.<sup>57</sup> This will enable issuance of licenses for the four projects in the Lewis River System for terms of 50 years, so that the licenses expire at the same time.

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<sup>55</sup>See *Wisconsin Power Company*, 94 FERC ¶ 61,037, at p. 61,164 (2001).

<sup>56</sup>In issuing new and original licenses, the Commission will coordinate the expiration dates of licenses to the maximum extent possible, to maximize future consideration of cumulative impacts at the same time in contemporaneous proceedings at relicensing. See 18 C.F.R. § 2.23 (2007).

<sup>57</sup>See *Wisconsin Electric Power Company*, 76 FERC ¶ 61,183 (1996).



The Director orders:

(A) This license is issued to Public Utility District No. 1 of Cowlitz County, Washington (licensee) for a period of 50 years, effective the first day of the month in which this order is issued. The 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:

(1) All lands, to the extent of the licensee's interests in those lands, enclosed by the project boundary shown by the following G drawings filed on August 30, 2006 and revised G-2 and G-3 drawings showing federal lands within the project boundary filed on May 14, 2008:

<b>Exhibit G Drawing No.</b>	<b>FERC Drawing No.</b>	<b>FERC Drawing Title</b>
G-1	2213-1018	Site Topography
G-2	2213-1019	Project Boundary (Sheet 1 of 5)
G-3	2213-1020	Project Boundary (Sheet 2 of 5)
G-4	2213-1021	Project Boundary (Sheet 3 of 5)
G-5	2213-1022	Project Boundary (Sheet 4 of 5)
G-6	2213-1023	Project Boundary Devil's Backbone (Sheet 5 of 5)

(2) Project works consisting of: (a) a 2.8-mile-long power canal consisting of both concrete and earth-lined sections and having a surface area of 53 acres; (b) a 1,100-foot-long, concrete-lined forebay; (c) an 82-foot-long check structure; (d) a 537-foot-long side channel spillway/wasteway that returns flow to the Lewis River, (e) a 90-foot-high intake structure with two vertical gates; (f) two 16-foot-diameter, 250-foot-long steel-lined penstocks; (g) a surge arresting structure that includes intake, conduit, and discharge structure; (h) a 144-foot-long by 60-foot-wide powerhouse, containing two 33.4- megawatt (MW) generating units, having a total installed capacity of 66.8 MW; (i) a tailrace discharging into Yale Lake; (j) two sets of three 13.8-kV transmission lines conveying power from the Swift No. 2 powerhouse to the Swift No. 2 substation, approximately 150 feet long; and (k) appurtenant facilities.

(3) The project works generally described above are more specifically shown and described by the exhibits A and F shown below.

Exhibit A: the entire Exhibit A filed on August 30, 2006. The Exhibit A previously approved by the Commission on June 27, 2007 is made part of this license.

Exhibit F: the following sections of Exhibit F filed on August 30, 2006:

<b>Exhibit F Drawing No.</b>	<b>FERC Drawing No.</b>	<b>FERC Drawing Title</b>
F-1	2213-1001	Project Layout
F-2	2213-1002	Powerhouse and Intake Area Plan
F-3	2213-1003	Powerhouse and Intake Plan and Sections
F-4	2213-1004	Surge Arresting Structure Plans and Sections
F-5	2213-1005	Power Canal Sections STA 2+40 to STA 94+05
F-6	2213-1006	Power Canal Transition Sections STA 94+05 to STA 104+25
F-7	2213-1007	Power Canal Sections STA 104+25 to Forebay
F-8	2213-1008	Power Canal Forebay Intake Area Sections
F-9	2213-1009	Drainage Box Culvert Plan and Sections
F-10	2213-1010	Check Structure
F-11	2213-1011	Wasteway
F-12	2213-1012	Switchyard Plan
F-13	2213-1013	Electrical Legends and Abbreviations
F-14	2213-1014	Main One-Line Diagram
F-15	2213-1015	DC and UPS One-Line Diagram
F-16	2213-1016	Unit Substation and MCC's One-Line Diagram
F-17	2213-1017	Fishing Pier

(4) All of the structures, fixtures, equipment, or 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) The Exhibits A, F, and G described above are approved and made part of the license.

(D) This license is subject to the conditions submitted by the U.S. Forest Service under section 4(e) of the FPA, as those conditions are set forth in Appendix A to this order.

(E) This license is subject to the conditions submitted by the Washington Department of Ecology under section 401(a)(1) of the Clean Water Act, 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 Commerce 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 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 D to this order.

(H) This license is subject to the incidental take terms and conditions of the Biological Opinion submitted by the National Marine Fisheries Service under section 7 of the Endangered Species Act, with the exception of section 6.1.5.a of the Agreement (flows through the upper release point during spill flows), as those conditions are set forth in Appendix E to this order.

(I) This license is subject to the incidental take terms and conditions of the Biological Opinion submitted by the U.S. Fish and Wildlife Service under section 7 of the Endangered Species Act, as those conditions are set forth in Appendix F to this order.

(J) This license is also subject to the articles set forth in Form L-1 (Oct. 1975), entitled "Terms and Conditions of License for Constructed Major Project Affecting Lands of the United States" (*see* 54 FPC 1799 *et seq.*), and the following additional articles:

Article 201. 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 66,800 kilowatts.

(b) recompensing the United States for the use, occupancy and enjoyment of lands the amount to be determined pursuant to article 203.

Article 202. Exhibit 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-2213-1001 through P-2213-1023) 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, G-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. The remaining set of aperture cards (Exhibit G only) and a copy of Form FERC-587 shall be filed with the Bureau of Land Management office at the following address:

State Director  
Bureau of Land Management  
P.O. Box 2965  
Portland, OR 97208-2965  
ATTN: FERC Withdrawal Recordation

(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 segregated from other project exhibits and identified as (CEII) material under 18 CFR §388.113(c). 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-2213-

####, G-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

Each Exhibit G drawing that includes the project boundary must contain a minimum of three known reference points (i.e., latitude and longitude coordinates, or state plane coordinates). The points must be arranged in a triangular format for GIS geo-referencing the project boundary drawing to the polygon data, and must be based on a standard map coordinate system. The spatial reference for the drawing (i.e., map projection, map datum, and units of measurement) must be identified on the drawing and each reference point must be labeled. In addition, each project boundary drawing must be stamped by a registered land surveyor.

(c) The licensee shall file two separate sets of the project boundary data in a geo-referenced electronic file format (such as ArcView shape files, GeoMedia files, MapInfo files, or a similar GIS format) with the Secretary of the Commission, ATTN: OEP/DHAC. The filing shall include both polygon data and all reference points shown on the individual project boundary drawings. A single electronic boundary polygon data file is required for the project boundary. The geo-referenced electronic boundary data file must be positionally accurate to  $\pm 40$  feet in order to comply with National Map Accuracy Standards for maps at a 1:24,000 scale. The file name(s) shall include: FERC Project Number, data description, date of this license, and file extension in the following format [P-2213, boundary polygon/or point data, MM-DD-YYYY.SHP]. The filing must be accompanied by a separate text file describing the spatial reference for the geo-referenced data: map projection used (i.e., UTM, State Plane, Decimal Degrees, etc), the map datum (i.e., North American 27, North American 83, etc.), and the units of measurement (i.e., feet, meters, miles, etc.). The text file name shall include: FERC Project Number, data description, date of this license, and file extension in the following format [P-2213, project boundary metadata, MM-DD-YYYY.TXT].

In addition, for those projects that occupy federal lands, a separate geo-referenced polygon file(s) is required that identifies transmission line acreage and non-transmission line acreage affecting federal lands for the purpose of meeting the requirements of 18 CFR §11.2. The file(s) must also identify each federal owner and federal acreage affected by the project boundary. Depending on the

geo-referenced electronic file format, the polygon, point, and federal lands data can be included in a single file with multiple layers.

Article 203. Exhibit G Drawings. Within 90 days of the date of issuance of this order, the licensee shall file for Commission approval revised Exhibit G drawings enclosing within the project boundary the 195.95-acre Devil's Backbone Wildlife Lands in Skamania County, Washington. The Exhibit G drawings must comply with section 4.39 and 4.41 of the Commission's regulations.

Article 204. 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 extensions 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 all construction/removal activities authorized by this license, the licensee shall file for Commission approval, revised exhibits A, F, and G, as applicable, to describe and show those project facilities as built. A courtesy copy shall be filed with the Commission's Division of Dam Safety and Inspections (D2SI)--Portland Regional Engineer, the Director, D2SI, and the Director, Division of Hydropower Administration and Compliance.

Article 401. Scheduling and Reporting Requirements and Amendment Applications.

(a) Requirement to File Plans for Commission Approval and Requirement to Consult

Various conditions of this license required by Appendices A [Forest Service section 4(e) conditions], C (Department of Commerce section 18 fishway prescription), D (Department of the Interior fishway prescription), and E [National Marine Fisheries Service (NMFS) biological opinion (BO)], require the licensee to prepare plans for approval by some or all of the signatories of the Lewis River Settlement Agreement. Each such plan shall also be submitted to the Commission for approval and shall include an implementation schedule. These plans are listed below.

	Forest Service section 4(e) condition	Commerce/ Interior section 18 condition	NMFS BO condition (Settlement Agreement section)	Plan name	Due date
1		7.1	1 (4.8.e)	Upstream transport plan	Within 18 months of license issuance
2		12	1 (4.9)	Bull trout collection and transport program	Within 6 months of license issuance
3	8		1 (7.4)	Habitat preparation plan	Within 6 months after license issuance
4	9		1 (7.5.3.2)	Aquatics fund strategic plan	Within 1 year of license issuance; report annually after license issuance
5			1 (8.2)	Hatchery and supplementation plan	Within 1 year of license issuance; updates every 5 years thereafter
6			1 (8.2.3)	Hatchery and supplementation operating plan	Annually, after approval of the hatchery and supplementation plan
7			1 (9.1)	Monitoring and evaluation plan	Within 2 years of license issuance

The licensee shall submit to the Commission documentation of its consultation, copies of comments and recommendations made in connection with the plan, and a description of how the plan accommodates the comments and recommendations. 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 make changes to any plan submitted. The plan shall not be implemented until the licensee is notified by the

Commission that the plan is approved. Upon Commission approval the plan becomes a requirement of the license, and the licensee shall implement the plan or changes in project operations or facilities, including any changes required by the Commission.

(b) Requirement to File Amendment Applications

Certain conditions in the appendices contemplate unspecified long-term changes to project operations, requirements, or facilities for the purpose of protecting and enhancing environmental resources. These changes may not be implemented without prior Commission authorization granted after the filing of an application to amend the license (18 CFR 4.200). The conditions are listed below.

	Condition no.	Modification
1	Section 18 no. 4.5 and BO no. 1	Adjustments or modifications to passage facilities to achieve performance standards
2	Section 18 no. 7 and BO no. 1	Implementation of alternative fish transport technologies, should they be deemed necessary
3	Section 18 no. 8 and BO no. 1	Implementation of an alternate method of downstream fish passage
4	Section 18 no. 9 and BO no. 1	Construction and operation of a downstream fish passage facility at Swift No. 1 dam, or a satellite passage facility
5	Section 18 no. 10 and BO no. 1	Construction of stress release ponds
6	Section 18 no. 11 and BO no. 1	Construction of upstream fish passage facility
7	Section 18 no. 14 and BO no. 1	Implementation of alternative bull trout collection methods
8	Section 18 no. 15 and BO no. 1	Construction, operation, or modification of an upstream bull trout facility
9	BO no. 1 and section 401 water quality certification no. 4.2	Construction of upper release point
10	BO no. 1 and section 401 water quality certification no. 4.2	Construction of constructed channel

Article 402. Aquatic Resources Management Measures. The licensee shall continue to implement the following aquatic resources management measures:

(a) net bull trout from the Swift No. 2 tailrace, and haul to a location defined by U.S. Fish and Wildlife Service (FWS) using National Marine Fisheries Service and FWS facility and handling guidelines for anadromous fish and bull trout;



(b) partially fund operation of Speelyai Hatchery; and

(c) manage the Devil's Backbone Conservation Covenant to benefit bull trout (section 5.2 of the Settlement Agreement filed on December 3, 2004).

The licensee shall include evidence of compliance with these measures in the annual reports filed with the Commission under section 14.2.6 of the Settlement Agreement.

Article 403. Wildlife Habitat Management Plan. Within 6 months from the issuance of this license, the licensee shall file with the Commission for approval, a Wildlife Habitat Management Plan (Habitat Plan) as described in section 10.8 of the Settlement Agreement (Agreement) filed on December 3, 2004. The Habitat Plan shall be developed for lands that are associated with the Swift No. 2 Project (as shown in Exhibit B to the Settlement Agreement and designated in section 10.8.5.2 of the Settlement Agreement). The purpose of the Habitat Plan shall be to accomplish the wildlife objectives referenced in Schedule 10.8 of the Agreement.

The Habitat Plan shall be developed after consultation with Terrestrial Coordination Committee (as defined in section 14 of the Agreement). The licensee shall include with the Habitat Plan an implementation schedule, copies of recommendations on the schedule, documentation of consultation, copies of recommendations on the completed plan after it has been prepared and provided to the entities above, and specific descriptions of how the entities' comments are accommodated by the plan. The licensee shall allow a minimum of 30 days for the 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 reasons.

The Commission reserves the right to require changes to the plan. Upon Commission approval the licensee shall implement the plan, including any changes required by the Commission.

The licensee shall file an annual plan provided by section 10.8.3 of the Agreement, for Commission approval, outlining the proposed wildlife measures and costs and showing the benefits to resources affected by project structures or operations. The annual plan shall explain the consistency with wildlife objectives outlined in section 10.8 of the Agreement.

The licensee shall review the effectiveness of the Habitat Plan consistent with section 10.8.4 of the Agreement. The licensee shall file for Commission approval, within 18 years of issuance of the license, the results of the effectiveness analysis, and any proposed changes to the Habitat Plan.

Article 404. *Wildlife and Terrestrial Resources Management Measures.* The licensee shall continue to implement the following measures to protect wildlife and terrestrial resources:

- (a) buffer sensitive aquatic and terrestrial habitat from ground-disturbing activities (e.g., timber harvest, construction);
- (b) manage project roads to maintain existing aquatic connectivity, and control runoff and erosion;
- (c) develop and implement measures to maintain existing aquatic connectivity and control runoff and erosion from roads through Cowlitz PUD lands on Devil's Backbone; and
- (d) implement best management practices to protect sensitive species and habitats during construction activities.

The licensee shall include evidence of compliance with these measures in the annual reports filed with the Commission under section 14.2.6 of the Settlement Agreement filed on December 3, 2004.

Article 405. *Barrier-free Canal Bank Fishing Facility.* Within 1 year of license issuance, the licensee shall construct one barrier-free bank fishing facility and associated parking to accommodate 13 vehicles, and install at least one portable toilet at the Swift No. 2 canal bridge, as outlined in section 11.3.1 of the Settlement Agreement (Agreement) filed on December 3, 2004.

The fishing facility and associated parking shall be constructed after consultation with Lewis River Advisory Committee (as defined in section 11.2.16 of the Agreement). Within 3 months after construction of the facility, the licensee shall file a report documenting the construction and include with the report documentation of consultation, copies of comments and recommendations on the completed design after it has been prepared and provided to the entities above, and specific descriptions of how the entities' comments are incorporated into the final design. The licensee shall allow a minimum of 30 days for the entities to comment and to make recommendations before implementing the final design. If the licensee does not adopt a recommendation, the filing shall include the licensee's reasons, based on project-specific reasons.

Article 406. *Cultural Resources Unanticipated Discovery Plan.* If archeological resource are discovered during project operation or involving any future construction activities at the project, the licensee shall follow the Cultural Resources Unanticipated Discovery Plan filed with the Commission as Volume 2 Appendix 3 in the Application

for New License for Swift No. 2 in April 2004.

Article 407. Tribal Access to Project Lands. The licensee shall allow tribal access to land within the Swift No. 2 Project boundary for traditional cultural practices, except where unsafe conditions occur.

Article 408. 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 Secretary of the Interior pursuant to section 18 of the Federal Power Act.

Article 409. 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 410. 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 shall also 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 of 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 type 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 water craft 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 that the proposed construction is needed and would not change the basic contour of the reservoir 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 to 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-kV or less); and (8) water intake or pumping facilities that do not extract more than one million gallons per day from a project reservoir. 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.

(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 water craft 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 Exhibit R or 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 submit a letter to the Director, Office of Energy Projects, 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 Director, 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 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 Exhibit R or approved report on recreational resources of an Exhibit E; or, if the project does not have an approved Exhibit R or 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 this order to be consulted on matters related to that filing. Proof of service on these entities must accompany the filing with the Commission.

(L) This order is final unless a request for rehearing is filed within 30 days of the date of its issuance, as provided in section 313(a) of the FPA. 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, except as specifically ordered by the Commission. The licensee's failure to file a request for rehearing shall constitute acceptance of this order.

J. Mark Robinson  
Director  
Office of Energy Projects

**Form L-1**

(October, 1975)

**FEDERAL ENERGY REGULATORY COMMISSION  
TERMS AND CONDITIONS OF LICENSE  
FOR CONSTRUCTED MAJOR PROJECT AFFECTING  
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 any 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 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 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 Commission may prescribe for the 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.** Timber on lands of the United State 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 22.** 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 23.** 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 24.** 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 25.** 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 26.** 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 27.** 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 28.** 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 29.** 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 30.** 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 31.** 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 32.** 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.

## **APPENDICES**

The Settlement Agreement filed on December 2 and 3, 2004, for the four Lewis River Projects (for information only) is attached for ease of reference in Appendix A for the Swift No. 1 Project No. 2111, 123 FERC ¶ 62,260 (2008).

Appendix A -- U.S. Forest Service Section 4(e) Conditions

Appendix B – Washington Department of Ecology Section 401 Water Quality Certification

Appendix C – U.S. Department of Commerce Section 18 Fishway Prescription

Appendix D – U.S. Department of the Interior Section 18 Fishway Prescription

Appendix E -- National Marine Fisheries Service Biological Opinion Terms and Conditions

Appendix F – U.S. Fish and Wildlife Service Biological Opinion Terms and Conditions

**APPENDIX A****Modified Terms and Conditions filed by the Forest Service under Section 4(e) of the Federal Power Act for the Swift No. 2 Hydroelectric Project No. 2213**

November 21, 2005

**LICENSE CONDITIONS NECESSARY FOR PROTECTION AND UTILIZATION OF THE GIFFORD PINCHOT NATIONAL FOREST IN CONNECTION WITH THE APPLICATION FOR LICENSE AND SETTLEMENT AGREEMENT FOR PROJECT NO. 2213, SWIFT NO.2 HYDROELECTRIC PROJECT.****I. GENERAL**

License articles contained in the Federal Energy Regulatory Commission's (Commission) Standard Form L-1 issued by Order No. 540, dated October 31, 1975, cover those general requirements that the Secretary of Agriculture, acting by and through the USDA Forest Service, considers necessary for adequate protection and utilization of the land and related resources of the Gifford Pinchot National Forest. Under authority of section 4(e) of the Federal Power Act (16 U.S.C. 797(e)), the following terms and conditions are deemed necessary for adequate protection and utilization of National Forest System lands and resources. These terms and conditions are based on those resources enumerated in the Organic Administration Act of 1897 (30 Stat. 11), the Multiple-Use Sustained Yield Act of 1960 (74 Stat. 215), the National Forest Management Act of 1976 (90 Stat. 2949), and any other law specifically establishing a unit of the National Forest System or prescribing the management thereof (such as the Wilderness Act or Wild and Scenic Rivers Act), as such laws may be amended from time to time, and as implemented by regulations and approved Land and Resources Management Plans prepared in accordance with the National Forest Management Act. Therefore, pursuant to section 4(e) of the Federal Power Act (FPA), the following conditions covering specific requirements for protection and utilization of National Forest System lands shall also be included in any license issued for the Swift No. 2 Hydroelectric Project (Project).

**II. USDA FOREST SERVICE CONDITIONS****Reservation of Authority**

The USDA-FS reserves the authority, as provided in Section 15.15 of the Settlement Agreement, to add to, delete from, or modify the modified terms and conditions contained herein in the event that the Licensee or the USDA-FS withdraws from the Settlement Agreement under the procedures identified in Section 15.11 of the Settlement Agreement prior to the Commission's issuance of a new license for the Project



**Condition No. 1 – Compliance with the Settlement Agreement**

The Licensee shall completely and fully comply with all provisions of the November 30, 2004 Settlement Agreement Concerning the Relicensing of the Lewis River Hydroelectric Projects – FERC Project Nos. 935, 2071, 2111, 2213, Cowlitz, Clark and Skamania Counties, Washington (Settlement Agreement) relating to the Swift No. 2 Project (Project No. 2213) as follows: 1. All protection, mitigation and enhancement measures and other obligations of the Licensee identified in the Settlement Agreement, including the Appendices, Exhibits and Schedules thereto, which may be or will be implemented on or affecting National Forest System (NFS) lands and resources, set out in Conditions 2 through 11. 2. All commitments of the Licensee in each and every plan referenced in the Settlement Agreement, including the Appendices, Exhibits and Schedules thereto, which implement activities on or affecting NFS lands and resources as set forth in Conditions 2 through 11. In the event that the Commission does not accept and incorporate, without material modification, the provisions of the Settlement Agreement, including the Appendices, Exhibits and Schedules thereto, that pertain to the Licensee, into the New License as defined in the Settlement Agreement; or the Licensee does not completely implement its obligation in accordance with the schedule set forth in the Settlement Agreement, the USDA-FS reserves its Federal Power Act § 4(e) authority, as provided in Section 15.15 of the Settlement Agreement, to supplement or modify its terms and conditions at a later time.

**Condition No. 2 – Terrestrial Coordination Committee and Aquatic Coordination Committee**

The Licensee, together with the Licensee for the Swift No. 1 Project (Project No. 2111), shall convene a Terrestrial Coordination Committee (TCC) to coordinate implementation of the terrestrial PM&E Measures, and an Aquatic Coordination Committee (ACC) to coordinate implementation of the aquatics PM&E Measures, as described in Section 14 of the Settlement Agreement. The Licensee's obligation to convene the TCC and the ACC shall be subject to Section 15.12 of the Settlement Agreement. Where Consultation as defined in the Settlement Agreement is required, the Licensee shall not have an obligation to Consult with Parties that have withdrawn from the Settlement Agreement, or with any Party if the Settlement Agreement is terminated, except as described in Section 15.13 of the Settlement Agreement.

**Condition No. 3 - Activities on National Forest System Lands**

- (a) If any protection, mitigation or enhancement measure is to be implemented by the Licensee on National Forest System (NFS) lands of the USDA-FS and is not specified as to its nature and location in the Commission's environmental analysis, then the Licensee shall conduct further environmental analysis as determined by

the Commission and shall obtain written authorization of the USDA-FS prior to the implementation of the measure.

- (b) For any proposed protection, mitigation or enhancement measure to be implemented by the Licensee on NFS lands outside existing project boundaries (such as the Juvenile Acclimation sites to be created by Condition 11 under Section 8.8 of the Settlement Agreement), the Licensee shall request a USDA-FS special use authorization for the measure. The Licensee shall fund any USDA-FS environmental analysis related to the issuance of the special use authorization. As part of the request for the special use authorization, the Licensee may provide environmental analysis of the proposed action that meets USDA-FS requirements for implementing the National Environmental Policy Act (NEPA) in existence at the time the request is made, including changes in statutes or regulations governing USDA-FS NEPA procedures. The Licensee may also refer to or rely on any previous NEPA analysis for the proposed measure to the extent the analysis is currently applicable, as determined by USDA-FS. The special use authorization, subject to Section 1.1.7 of the Settlement Agreement, may contain stipulations for fire protection, safety or other standard special use authorization measures consistent with the requirements in effect at the time for implementation of similar actions on NFS lands.

#### **Condition No. 4 - Heritage Resource Protection**

The Licensee shall follow the Cultural Resources Unanticipated Discovery Plan as provided in Section 13.1.2.1 of the Settlement Agreement as it affects NFS lands and resources.

#### **Condition No. 5 - Monitoring and Evaluation Plan**

The Licensee, together with the Licensee for the Swift No. 1 Project, shall include those elements of Section 9.6 of the Settlement Agreement that are conducted on or which affect NFS land, in the M&E Plan that is required under Section 9 of the Settlement Agreement, and shall implement those monitoring and evaluation elements.

#### **Condition No. 6 – Public Information To Protect Bull Trout**

The Licensee shall provide one informational sign describing bull trout and the need to protect bull trout as described in Section 5.7 of the Settlement Agreement.

#### **Condition No. 7 – Aquatics Fund**

The Licensee shall fund and implement, or provide funds through a grant or other means to another entity to implement, resource protection measures (“Resource Projects”) to

enhance, protect, and restore aquatic habitat upstream of Swift No. 2, including, without limitation, the Bypass Reach as described in Sections 7.5, 7.7 and 7.8 of the Settlement Agreement.

### **Condition No. 8 – Juvenile Acclimation Sites**

The Licensee, together with the licensee for the Swift No. 1 project, shall place juvenile salmonid acclimation sites consisting of fish containment areas described in Section 8.8.1 of the Settlement Agreement in areas selected pursuant to Section 8.8.1 of the Settlement Agreement.

### **Condition No. 9 – Dispersed Camping Management Funding**

The Licensee shall provide, or cause to be provided, \$780 in 2004 dollars annually (Adjusted for Inflation) to the USDA-FS to manage Project-related dispersed camping on National Forest System lands as described in Section 11.3 and 11.3.5 of the Settlement Agreement.

### **Condition No. 10 – Recreation Swift No. 2 Power Canal Bank Fishing Facility**

The Licensee shall operate, maintain and replace, as needed, an ADA-compliant bank fishing facility at the Swift No. 2 Canal Bridge, which shall include a parking area to accommodate approximately 13 vehicles and provide at least one and possibly two (depending on available space and use) portable toilets or their equivalent on the last weekend of April (opening weekend of fishing) and between Memorial Day and Labor Day each year.

### **Interpretation and Education Program**

To the extent feasible, the Licensee shall collaborate with the licensee of the Swift No. 1 project to produce a single I&E Program. Commencing after Issuance of the New License for the Swift No. 2 Project, the Licensee shall develop and implement or cause to be developed and implemented, in consultation with the licensee of the Swift No. 1 project, an I&E Program for recreation opportunities (including, at a minimum, a watchable wildlife component) on the lands within the Swift No. 2 Project Boundary. In developing the I&E Program, the Licensee shall request comments from the Parties to the Settlement Agreement.

### **Recreational Access to Project Lands**

Beginning upon Issuance of the New License for the Swift No. 2 Project, the Licensee shall allow non-motorized public access to lands within the Swift No. 2 Project Boundary for wildlife viewing, angling, hunting, and other recreational purposes, subject to

capacity restrictions, restrictions for security of its Project, restrictions to protect environmental and cultural resources, the Licensee's right to charge fees (provided that the Licensee shall not charge fees for use of the Swift No. 2 Power Canal Bank Fishing Facility), and restrictions for public safety, as determined by the Licensee in its reasonable discretion, subject to third party property rights, and consistent with Commission requirements. Such public access shall not require the Licensee to construct or maintain facilities or to provide personnel for supervision of such access, except to the extent expressly provided for in the Settlement Agreement.

**Condition No. 11 – Forest Road 90 Maintenance Funding**

The Licensee shall make, or cause to be made, payments to USDA-FS for the maintenance of the Section of Forest Road 90 between the Skamania-Cowlitz County line and milepost 16.2 near the Northwoods Community and meet with USDA-FS as described in Section 13.2.2 of the Settlement Agreement. The Licensee shall pay appropriate use fees to the USDA-FS on a case-by-case basis for its use of Forest Road 90 to haul heavy loads.

**APPENDIX B**  
**Washington Department of Ecology Section 401 Water Quality Certification for the**  
**Swift No. 2 Project No. 2213**

October 26, 2006; Amended December 21, 2007 and January 17, 2008

#### **4.0 CONDITIONS**

Through issuance of this Certification-Order, Ecology certifies that it has reasonable assurance that the operation of the Swift No. 2 Project and activities associated with its continued operation as conditioned will be conducted in a manner that will not violate applicable water quality standards and other appropriate requirements of state law. In view of the foregoing and in accordance with 33 USC § 1341, RCW 90.48.120, RCW 90.48.260, and Chapter 173-201A WAC, this water quality certification is granted to Cowlitz PUD for the Swift No.2 Hydroelectric Project (FERC No. 2213) subject to the conditions within this Certification-Order.

Certification of this Project does not authorize the Licensee to exceed applicable state water quality standards (Chapter 173-201A WAC). Furthermore, nothing in this Certification-Order shall absolve the Licensee from liability for contamination and any subsequent cleanup of surface waters, ground waters, or sediments occurring as a result of activities associated with Project operations and FERC license conditions.

#### **4.1 GENERAL REQUIREMENTS**

- 1) The Project shall comply with all water quality standards approved by the Environmental Protection Agency (currently codified in Ch. 173-201A WAC), ground water quality standards (currently codified in Ch. 173-200 WAC), and sediment quality standards (currently codified in Ch. 173-204 WAC) and other appropriate requirements of state law. The conditions below set forth adaptive management processes and measures to achieve full compliance with standards and constitute a water quality attainment plan under the 2003 WAC 173-201A-510(5) for temperature.
- 2) In the event of changes or amendments to the state water quality, ground water quality, or sediment standards, or changes in or amendments to the state Water Pollution Control Act (RCW 90.48), or changes in or amendments to the Clean Water Act, such provisions, standards, criteria, or requirements shall apply to this project and any attendant agreements, orders or permits. Ecology will notify the Licensee through an Administrative Order of any such changes or amendments applicable to its project.
- 3) Discharge of any solid or liquid waste to the waters of the state of Washington without approval from Ecology is prohibited.

- 4) The Licensee shall obtain Ecology review and approval before undertaking any change to the Project or Project operations that might significantly and adversely affect the water quality or compliance with any applicable water quality standard (including designated uses) or other appropriate requirement of state law.
- 5) This Certification-Order does not exempt compliance with other statutes and codes administered by federal, state, and local agencies.
- 6) A Hydraulic Project Approval (HPA) (under 77.55 RCW) shall be acquired from the Washington State Department of Fish and Wildlife (WDFW) prior to any work in waters of the State.
- 7) Ecology retains the right, by further Order, to modify schedules or deadlines provided under this Certification-Order or provisions it incorporates.
- 8) Ecology retains the right by Administrative Order to require additional monitoring or studies or measures if it determines there is likelihood that violations of water quality standards or other appropriate requirements of state law have occurred or may occur, or insufficient information exists to make such determination.
- 9) Ecology reserves the right to amend this Certification-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. Any such amended Certification-Order shall take effect immediately upon issuance, unless otherwise provided in the amended Certification-Order, and may be appealed to the Pollution Control Hearings Board (PCHB) under Ch. 43.21B RCW.
- 10) Ecology reserves the right to issue administrative orders, assess or seek penalties, and to initiate legal actions in any court or forum of competent jurisdiction for the purposes of enforcing the requirements of this Certification-Order.
- 11) The conditions of this Certification-Order shall not be construed to prevent or prohibit the Licensee 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.
- 12) If five (5) or more years elapse between the date this Certification-Order is issued and issuance of the new FERC license for the Project, this Certification-Order shall be deemed to be expired and denied without prejudice at such time and the Licensee shall send Ecology an updated application for a Clean Water Act Section 401 Certification that reflects then current conditions, regulations and technologies. This provision shall not be construed to otherwise limit the reserved authority of Ecology to withdraw, amend, or correct the Certification-Order before or after the issuance of a FERC license.

- 13) This Certification-Order may be modified or withdrawn by Ecology prior to the issuance of the license based upon significant new information or changes to water quality standards or appropriate requirements of state law.
- 14) Copies of this Certification-Order and associated permits, licenses, approvals and other documents shall be kept on the Project site and made readily available for reference by the Licensee, its contractors and consultants, and by Ecology.
- 15) The Licensee shall allow Ecology access to inspect the Project and Project records required by this Certification-Order for the purpose of monitoring compliance with its conditions. Access shall occur after reasonable notice, except in emergency circumstances.
- 16) The Licensee shall, upon request by Ecology, fully respond to all reasonable requests for materials to assist Ecology in making determinations under this Certification-Order and any resulting rulemaking or other process.
- 17) Any work that is out of compliance with the provisions of this Certification-Order, or conditions that result in distressed, dying or dead fish, any discharge of oil, fuel, or chemicals into state waters, or onto land with a potential for entry into state waters, or turbidity greater than 5 NTU over background conditions in Yale Lake; or greater than 5 NTU over background conditions or greater than 10 per cent in the bypass reach or canal if background conditions are greater than 50 NTU is prohibited. If these occur, the Licensee shall immediately take the following actions:
  - a) Cease operations at the location of the violation to the extent such operations may reasonably be causing or contributing to the problem.
  - b) Assess the cause of the water quality problem and take appropriate measures to correct the problem and/or prevent further environmental damage.
  - c) Notify Ecology of the failure to comply. Oil or chemical spill events shall be reported immediately to Ecology's 24-Hour Spill Response Team at (800) 258-5990 within 24 hours. Other non-compliance events shall be reported to Ecology's Federal Permit Manager at 800 424-8802.
  - d) Submit a detailed written report to Ecology within five (5) days that describes the nature of the event, corrective action taken and/or planned, steps to be taken to prevent a recurrence, results of any samples taken, and any other pertinent information.
  - e) Observed violations at the Project shall be highlighted in the annual monitoring report.

Compliance with these requirements does not relieve the Licensee from responsibility to maintain continuous compliance with the terms and conditions of this Certification-Order or the resulting liability from failure to comply.

- 18) The Project shall meet the Class A standards in the bypass reach and canal and the Lake Class standards in Yale Lake.
- 19) A Water Quality Management Plan (WQMP) is required. All water quality-related plans described below shall be included as separate sections of the WQMP.

## **4.2 INSTREAM FLOWS AND HABITAT FLOWS**

### ***Flows***

- 1) In order to meet the Class A standards listed in WAC 173-201A-030(2), the Project shall comply with the instream flow obligations identified in the Lewis River Settlement Agreement signed November 30, 2004. Details not found in the Settlement Agreement are defined in the following conditions. The flow conditions in the Settlement Agreement are provided herein as Exhibit A.
- 2) The Licensee, together with the Licensee for the Swift No 1 Project shall construct two channels in the Lewis River Bypass Reach for releasing water from the Swift No.2 canal to the bypass reach at the following locations:
  - a) At the “Upper Release Point” at the upstream end of the Bypass Reach. The constructed channel shall include washed, appropriately sized gravel for spawning fish, and
  - b) At the exit of the “Canal Drain” approximately one mile downstream of the Upper Release Point. The constructed channel shall include washed, appropriately sized gravel for spawning fish.
- 3) Within 6-months after issuance of the new license for the Swift No. 2 project or the Swift No. 1 project, whichever is later, and all required Interests in Land and Permits have been obtained, the Licensee, together with the Licensee for the Swift No. 1 project, shall begin construction of the Upper Release Point described in Section 6.1.2 of the Settlement Agreement and a channel at the upstream end of the Bypass Reach between the Swift No. 1 tailrace and the plunge pool below the Swift No. 1 spillway (the Upper Release Channel) and shall complete construction as soon as practicable. Such channel shall be designed to provide fish habitat utilizing the water delivered by the Upper Release Point. The design of the channel shall be approved by Ecology.
- 4) As soon as practicable after the construction of the Upper Release Point is complete, the Licensee, together with the Licensee for the Swift No. 1 project, shall complete construction of the Constructed Channel as described in the Settlement Agreement Section 6.1.3 to provide fish habitat in the channel at the exit of the “Canal Drain” approximately one mile downstream of the Upper Release Point (the Canal Drain Constructed Channel). The design of the channel



shall be approved by Ecology.

- 5) The Licensee, together with the Licensee for the Swift No. 1 Project shall provide combined flow releases from these two release points not to exceed 55,200 acre-feet in each year (55,349 acre-feet in each leap year). The following instream flows do not conflict with Section 6.1.5 Conditions on Combined Flow Schedule of the Settlement Agreement except Ecology will not allow the Licensee, at their discretion to stop instream flow releases through the Upper Release Point as described in 6.1.5.a in the Agreement.
- 6) Ecology requires the following instream flow schedule which may be altered in the future by mutual agreement of Ecology and the Aquatic Coordination Committee (ACC) following the adaptive management process described in the Settlement Agreement in 6.1.4.c.

For the “Upper Release Point” the instream flow release will commence on the date specified in the Settlement Agreement and be:

November 1 to November 15	76 cfs
November 16 to November 30	56 cfs
December 1 to January 31	51
February 1 to February 28 (29 on leap years)	75 cfs (74 cfs only for 1 <sup>st</sup> week in leap year)
March 1 to May 31	76 cfs
June 1 to September 23	54 cfs
September 24 to September 30	55 cfs
October 1 to October 31	61cfs

- a) For the “Canal Drain” release the instream flow will commence on the date specified in the Settlement Agreement and shall be 14 cfs.
- b) Adjustments to these flows will occur if monitoring indicates fish habitat would be improved using alternate flow regimes of up to 55,200 acre-feet in each year (55,349 acre-feet in each leap year). The ACC will recommend for Ecology’s approval any adjustments to these flows.

### ***Habitat***

- 7) The Licensee, together with the Licensee for the Swift No. 1 project, shall augment gravel in the bypass reach using the following five phases:

Phase 1. Within 1 year after the issuance of the license for the Swift No. 2 Project or the license for the Swift No. 1 project, which ever is later, during the first in-water work window after all applicable Permits have been obtained, place approximately 160 tons of gravel spread between locations selected by Ecology in

the Lewis River bypass reach. The gravel will be obtained from existing gravel benches along the bypass reach unless Ecology determines that washed gravel is necessary because the existing source gravel is not suitable for this purpose.

Phase 2. During the spring following the first occurrence of spill of 5,000 cfs or greater at Swift No. 1 after gravel has been placed in the bypass reach as described in Phase 1, survey the bypass reach to determine sites where the gravel placed in Phase 1 naturally deposited and where fish spawning is most likely to occur. (See condition 4.8.3 of this Certification-Order under Monitoring and Reporting)

Phase 3a. If the gravel survey described in Phase 2 shows that during Swift No. 1 spill of 5,000 cfs or greater, the gravel placed in the bypass reach in Phase 1 remained in the channel where it was deposited and it provides suitable fish spawning habitat, Ecology will decide if and where additional gravel augmentation is necessary.

Phase 3b. If the gravel survey described in Phase 2 shows that during Swift No. 1 spill of 5,000 cfs or greater, the gravel placed in the bypass reach during Phase 1 provides suitable fish spawning habitat, and more gravel in these areas would provide additional fish spawning habitat, then, during the first in-water work window following the gravel survey described in Phase 2, and after all applicable Permits have been obtained, distribute up to 160 tons of gravel among the sites identified in Phase 2. If Ecology determined in Phase 1 that existing gravel on the benches of the bypass reach may be used for augmentation, such gravel will be used in this Phase 3b, otherwise Ecology may require washed gravel.

Phase 3c. If the gravel survey described in Phase 2 shows that during Swift No. 1 spill of 5,000cfs or greater, the gravel placed in the bypass reach during Phase 1 was transported out of the reach or to the benches outside the bypass flow channel, Ecology may decide that no further gravel augmentation is necessary.

Phase 4. During the spring following the first occurrence of spill of 5,000 cfs or greater at Swift No. 1 after the gravel augmentation described in Phase 3b, survey the bypass reach to determine the location of the augmented gravel. (See condition 4.8.3 of this Certification-Order under Monitoring and Reporting)

Phase 5a. If the gravel survey described in Phase 4 shows that the gravel remained where it was placed during Phase 3b, Ecology may decide that no further gravel augmentation is necessary.

Phase 5b. If the gravel survey described in Phase 4 shows that the gravel is no longer where it was placed in Phase 3b and the gravel is not providing suitable fish spawning habitat, then, during the first in-water work window following the gravel

survey described in Phase 4, and after all applicable Permits have been obtained, distribute up to 160 tons of gravel among the sites identified in Phase 2. If Ecology determined in Phase 1 that existing gravel on the benches of the bypass reach may be used for augmentation, such gravel will be used in this Phase 5b, otherwise Ecology may require washed gravel. (See condition 4.8.3 of this Certification-Order under Monitoring and Reporting)

To augment and maintain gravel patches at the specific sites where natural gravel deposition would likely occur and fish spawning is likely, Phases 4 and 5b may be repeated up to two times for a total five gravel augmentation events during the term of the Swift No. 2 and Swift No. 1 licenses (Phase 1, Phase 3b, Phase 4+5b, Phase 4+5b, and Phase 4+5b).

- 8) The Licensee, together with the Licensee for the Swift No. 1 project shall perform instream monitoring to determine the success of fish salmonid rearing and spawning in the mainstem Lewis River Swift bypass reach and constructed channels, and passage to both constructed channels. A monitoring program as described in condition 4.8.3 of this Certification Order under Monitoring and reporting shall include the following:

Conduct surveys of juvenile and adult fish populations (including fish size, species, and location) in the Upper Release Point Constructed Channel, the Canal Drain Constructed Channel and the mainstem Lewis River bypass reach according to the following schedule during the term of the Swift No. 2 and Swift No. 1 licenses:

- a) Quarterly for one year beginning in the year after the first full year of operation of both the Upper Release Point and Canal Drain constructed channels (year 2 of operation). Waiting one full year after both release points and channels are operational allows the aquatic ecosystem to become established.
- b) Quarterly for one year in the fourth year after the first full year of operation of both the Upper Release Point and Canal Drain constructed channels (year 5 of operation). Surveying in the fourth year will determine fish response to the combined flow schedule described above in Condition 4.2.6 under flows. (See condition 4.8.3 of this Certification-Order under Monitoring and Reporting)
- c) Quarterly for one full year beginning one year after each change in the combined flow schedule, in the event that Ecology, together with the ACC, implements a change in the combined flow schedule as described in Condition 4.2.6 above and in Section 6 of the Settlement Agreement. (See condition 4.8.3 of this Certification-Order under Monitoring and Reporting)

- d) Quarterly for one year after reintroduction of anadromous fish into Yale Lake in Year 13 of the Yale License unless the Services determine reintroduction of anadromous fish into Yale Lake is inappropriate (pursuant to Section 4.1.9 of the Settlement Agreement) or unless a survey in the same year is being conducted under "c" above. (See condition 4.8.3 of this Certification-Order under Monitoring and Reporting)
  - e) Quarterly for one year commencing one year after construction of upstream fish passage at the Swift Projects unless a survey in the same year is being conducted under "c" above. (See condition 4.8.3 of this Certification-Order under Monitoring and Reporting)
- 9) During the years listed above in 4.1(8)(a-e), redd surveys will be conducted once every two weeks from September 15<sup>th</sup> to November 15<sup>th</sup> and February 1<sup>st</sup> to May 31<sup>st</sup> in accordance with Condition 4.8.3 of this Certification-Order.

#### **4.3 TOTAL DISSOLVED GAS (TDG)**

- 1) The Project shall not cause any exceedance of the TDG water quality criteria as specified in WAC 173-201A 030 (2)(c)(iii) in the bypass reach or canal, WAC 173-201A(5)(c)(iii) in Yale Lake, and 173-201A-060 (4)(a) in any waters of the Project.
- 2) If the water quality criteria for TDG are modified over the term of the license, such modified criteria shall apply to this Project.
- 3) The Licensee shall operate Swift No. 2 Dam to maintain the TDG associated with air-injected to turbine flows 110% or less TDG.
- 4) The Licensee shall perform water quality monitoring in turbine water below Swift No. 2 Dam for turbine air injection generated TDG in accordance with Section 4.8.3 of this Certification-Order under Monitoring and Reporting.
- 5) The Licensee shall limit spills to emergencies and necessary maintenance where spill is otherwise unavoidable.

#### **4.4 TEMPERATURE**

- 1) Swift 2 Canal, Bypass Reach and within Swift No. 2 Dam.  
The Project shall not cause any violation of the temperature water quality criteria as specified for Class 'A' waters, WAC 173-201A-030(2)(c)(iv), in Swift No. 2 Dam, the canal or the bypass reach. The Licensee shall not cause these waters to exceed 18°C. If the presence or operation of the Project causes violation of these criteria, the Licensee shall modify its operation to the extent necessary to ensure that the Project does not cause such exceedance.

- a) The Licensee shall provide a Swift No. 2 forebay temperature monitoring plan for Ecology's review and approval by January 31, 2007. (See condition 4.8.3 of this Certification-Order under Monitoring and Reporting).
  - b) The Licensee shall begin monitoring for temperature in the forebay of Swift No. 2 in the summer of 2007, continue for at least two years, and follow the temperature monitoring plan.
  - c) If the presence or operation of the Project causes water temperature in the canal, or bypass reach to violate the water quality criteria, the Licensee shall modify its operation to the extent necessary to ensure that the Project does not cause such violation.
- 2) If water quality temperature exceedances are found, the Licensee shall:
- a) Develop a Temperature Water Quality Attainment Plan (TWQAP) that provides a detailed strategy for maintaining the highest attainable water quality condition to best protect the biota with respect to temperature that is feasible to achieve. The TWQAP shall identify and evaluate potential reasonable operational and structural changes to improve temperature. Any changes that would conflict with other conditions of this Certification-Order require prior approval by Ecology. The plan shall also identify the temperature regime that is feasibly achievable, such that the temperature in the discharge is protected to the highest degree feasible. A Responsiveness Summary shall be incorporated into the TWQAP that evaluates the effectiveness of the modifications (if any) and identifies follow-up studies and actions that can be performed to further improve temperature based on the initial findings.
  - b) Submit a draft of the TWQAP to Ecology within one (1) year of obtaining information that water quality criteria for temperature have been exceeded. The TWQAP must include a reasonable schedule for carrying out an adaptive process for evaluating feasible technical and operational changes that will improve water quality protection within ten (10) years of license renewal. This process may include modeling and physical testing of operational changes, and modeling changes in structural revisions and testing those structural revisions that can reasonably be implemented within the ten year period. Significant structural or operational revisions that may impose potentially unreasonable costs or create potentially unreasonable societal effects may be evaluated as part of a formal Use Attainability Analysis consistent with the federal and state water quality regulations after the ten year compliance period has ended.
- 3) Swift No. 2 tailrace/Yale Lake. The Project shall not cause any violation of the temperature water quality criteria as specified for Lake Class waters in WAC 173-201A-030(5) in Yale Lake. If the presence or operation of the Project causes violation of these criteria, Swift No. 2 shall modify its operation to the extent necessary to ensure that the Project does not cause such exceedance. The Lake

Class temperature criterion that applies to Yale Lake mandates no measurable change from natural conditions.

- 4) The Licensee shall monitor for temperature in accordance with Section 4.8.3 of this Certification-Order under Monitoring and Reporting.

#### **4.5 CONSTRUCTION PROJECTS, MISCELLANEOUS DISCHARGES, AND HABITAT MODIFICATIONS**

The following applies to all in-water or over-water construction work related to the Project that can impact surface- or ground-water quality. This includes, but is not limited to, construction, operation, and maintenance of fish collection structures, generation turbines, penstocks, hatcheries, transportation facilities, portable toilets, boat ramps, transmission corridors, structures, and staging areas. This also includes emergencies for all activities related to Project operation.

- 1) If water quality exceedances are predicted as being unavoidable during construction or maintenance of a Project, a short-term modification must be applied for in writing to Ecology at least three (3) months prior to Project initiation. If any Project has a long-term impact on a regulated water quality parameter, characterization monitoring must be performed for the impacted parameter(s), and a series of protection plans (described below) must be included in the Water Quality Protection Plan discussed below. This may require additional management practices to minimize impacts over the license period.
- 2) A Water Quality Protection Plan (WQPP) shall be prepared, and followed, for all Project-related work that is in or near-water that has the potential to impact surface and/or groundwater quality. The plan shall include control measures to prevent contaminants from entering surface water and groundwaters, and shall include, but not be limited to, the following elements:
  - a) A Stormwater Pollution Prevention Plan (SWPPP) shall specify the Best Management Practices (BMPs) and other control measures to prevent contaminants entering the Project's surface water and groundwaters. The SWPPP shall address the pollution control measures for the Licensee's activities that could lead to the discharge of stormwater or other contaminated water from upland areas. The SWPPP must also specify the management of chemicals, hazardous materials and petroleum (spill prevention and containment procedures), including refueling procedures, the measures to take in the event of a spill, and reporting and training requirements.
  - b) In-Water-Work Protection Plan (IWWPP). The In-Water-Work Protection Plan shall be consistent with the SWPPP and shall specifically address the BMPs and other control measures for the Licensee activities that require work within

surface waters. Turbidity and dissolved oxygen shall be monitored upstream of the location where in-water construction is taking place and at the point of compliance (as defined in WAC 173 201A-110(3)(a-d)) during construction. Samples shall be taken at a minimum of once each day during construction in or adjacent to any water bodies within the project area that may be affected by the construction. The IWWPP shall include all water quality protection measures consistent with a Hydraulic Project Approval (HPA) for the Project.

- c) The WQPP shall include procedures for monitoring water quality, actions to implement should a water quality exceedance occur, and procedures for reporting any water quality violations to Ecology. The WQPP shall include all water quality protection measures consistent with a Hydraulic Project Approval (HPA) for the Project. The WQPP shall be submitted to Ecology for review and approval at least three (3) months prior to Project initiation, and a copy of the WQPP shall be in the possession of the on-site construction manager, and available for review by Ecology staff, whenever construction work is under way.
- d) When a construction project meets the coverage requirements of the National Pollution Elimination System (NPDES) permit and State Waste Discharge General Permit for Stormwater Discharges associated with construction activity, the Licensee shall either, at Ecology's discretion, apply for this permit and comply with the terms and conditions of the permit or apply for and comply with the terms of an individual NPDES permit.

### 3) Best Management Practice

- a) Work in or near the reservoir, water within the dam, the river, or any wetlands shall include all reasonable measures to minimize the impacts of construction activity on waters of the state. Water quality constituents of particular concern are turbidity, suspended sediment, settleable solids, oil and grease, and pH. These measures include use of Best Management Practices to control erosion and sedimentation, proper use of chemicals, oil and chemical spill prevention and control, and clean-up of surplus construction supplies and other solid wastes.
- b) During construction, all necessary measures shall be taken to minimize the disturbance of existing riparian, wetland or upland vegetation.
- c) All construction debris shall be properly disposed of on land so that the debris cannot enter a waterway or cause water quality degradation to state waters. Retention areas or swales shall be used to prevent discharging of water from construction placement areas.
- d) The Licensee shall ensure that any fill materials that are placed for the proposed habitat improvements in any waters of the state do not contain toxic materials in toxic amounts.

## 4) Maintain Turbidity Standards

- a) Certification of this Project does not authorize the Licensee to exceed the turbidity standard beyond the mixing zone described in (b), (c), and (d) below. Turbidity in the Class A waters of the bypass reach and canal shall not exceed 5 NTU over background turbidity when turbidity is 50 NTU or less, or have more than a 10 percent increase in turbidity when the background turbidity is more than fifty (50 NTU). Turbidity in the Lake Class waters of Yale Lake shall not exceed 5 NTU over background turbidity.
- b) For Class A waters, a mixing zone is established within which the turbidity standard is waived consistent with WAC 173-201A-100(7) and -110(3). The mixing zone is established to allow only temporary exceedances of the turbidity criteria during and immediately after in-water work. The temporary turbidity mixing zone shall be as follows:
  - i. For waters up to 10 cfs flow at the time of construction, the point of compliance shall be 100 feet downstream from activity causing the turbidity exceedance.
  - ii. For waters above 10 cfs up to 100 cfs flow at the time of construction, the point of compliance shall be 200 feet downstream from activity causing the turbidity exceedance.
  - iii. For waters above 100 cfs flow at the time of construction, the point of compliance shall be 300 feet downstream from activity causing the turbidity exceedance.
- c) For Lake Class waters, certification of this Project does not authorize the Licensee to exceed the turbidity standard beyond the mixing zone described in (d) and (e) below.
- d) Step 1. Mixing zones shall not be allowed unless it can be demonstrated to the satisfaction of Ecology that:
  - i. Other siting, technological, and managerial options that would avoid the need for a lake mixing zone are not reasonably achievable;
  - ii. Overriding considerations of the public interest will be served; and
  - iii. All technological and managerial methods available for pollution reduction and removal that are economically achievable would be implemented prior to discharge
- e) Step 2. Mixing zones, singularly or in combination with other mixing zones, shall comply with the most restrictive combination of the following:
  - i. Not exceed ten percent of the waterbody volume;
  - ii. Not exceed ten percent of the waterbody surface area (maximum radial extent of the plume regardless of whether it reaches the surface); and



iii. Not extend beyond fifteen percent of the width of the waterbody.

- 5) The above conditions do not relieve the Licensee from the need to obtain all the applicable permits. Activities that could discharge pollutants to waters of the state must use appropriate Best Management Practices to protect water quality.

#### **4.6 OIL SPILL PREVENTION AND CONTROL**

- 1) No oil, fuel, or chemicals shall be discharged into waters of the state, or onto land with a potential for entry into waters of the state as prohibited by Ch. 90.56 RCW and Ch. 90.48 RCW.
- 2) Contain and remove from the water, visible floating oils released from construction or Project operation.
  - a) In the event of a discharge of oil, fuel or chemicals into state waters, or onto land with a potential for entry into state waters, immediately begin and complete containment and clean-up efforts, taking precedence over normal work. Clean-up shall include proper disposal of any spilled material and used clean-up materials.
  - b) Do not use emulsifiers or dispersants in waters of the state without prior approval from Ecology, Southwest Regional Office.
  - c) Within three months of receiving the license from FERC, establish an Ecology-approved on-site spill cleanup material inventory. Maintain this on-site inventory and a complete inventory list.
  - d) Project Operators shall be familiar with and trained on use of oil spill cleanup materials. In the event of an oil spill, properly dispose of used/contaminated materials and oil and as soon as possible restock new supplies. Include records of proper disposal in the oil consumption records and keep copies of disposal records of contaminated cleanup supplies on-site for inspection.
  - e) Ensure that operational work boats and trained boat operators are available on short notice in the event of a spill. Install mechanisms as appropriate to safely launch or lower work boats into areas where work boats would be deployed in the event of an oil spill. These mechanisms must be pre-approved by Ecology.
  - f) Keep SPCC Plans as required and historical spill records on-site. Provide these to Ecology immediately upon request.
  - g) Identify and map floor drains. Post these maps at the Project in a conspicuous location for use by Operators and other personnel in the event of an oil spill. Seal floor drains that are no-longer needed.

- h) Install, or have on site to deploy stair-cases, ladders, etc. which will allow for oil spill response staff to safely reach areas that could, in the event of an oil spill, need to be accessed to deploy sorbent pads and boom materials.

### 3) Oil-Water Separators (OWS)

- a) Within three months of issuance of the FERC license, submit a maintenance plan for the OWS to Ecology for approval. This maintenance plan must include a process to periodically test the oil-stop valves and provide assurance that they will work as designed. (See condition 4.8 of this Certification-Order under Monitoring and Reporting)
- b) OWS shall only admit rain and water run-off that originates in the containment area that is intended to drain into the OWS.
- c) Perform periodic and appropriate maintenance and inspection on a schedule to include sediment removal. (See condition 4.8 of this Certification-Order under Monitoring and Reporting)
- d) Clean and service the OWS after each event where oil is introduced into the OWS.
- e) Evaluate each oil water separator (OWS) for inflows to account for the total volume of the largest transformer plus fifteen (15) percent. Verify and conduct corrective action that will insure that oil would not be washed through the OWS if a failure of the single largest transformer in the containment area occurs during a major rain event.

### 4) Transformers

- a) Transformer deck containment areas must be impervious. Conduct periodic inspections and resurface areas, fill cracks, caulk metal plate footings or otherwise ensure that containment areas will contain spills from the volume of the largest transformer plus fifteen (15) percent.
- b) Obtain prior approval from Ecology before breaching containment areas for reasons other than containment area maintenance.
- c) Conform to industry standards for protecting water quality and preventing and containing oil spills when transporting transformers and transformer oil.
- d) Snowy or icy conditions require daily inspections of transformer deck containment area including an inspection of the drains leading to the Oil-Water Separator (OWS) for freeze-up conditions. Remove any observed rain water pooling in the containment areas.

### 5) Sumps

- a) Maintain oil sensors on the surface of the water in each sump. Inspect and test these sensors every three (3) months or sooner if needed to insure that they will work as designed. Visually inspect all of these areas each week or immediately

if oil is suspected to be present such as in the event of an oil sensor alarm or the observance of an oil or grease spill in the turbine pit of sufficient volume to reach the sump. Oil detected in the sumps by visual inspection or by sensor requires immediate cleanup, and oil in an amount that triggers an oil sensor alarm must immediately be report to the Emergency Management Division (EMD). (See condition 4.8.3 of Certification-Order 3676 under Monitoring and Reporting.)

- b) Immediately repair oil leaks in the turbine pit that are of sufficient volume to reach the sump and that can not be contained by placing a container underneath the leak. Immediately repair water leaks located in the turbine pit area that are leaking at a volume of greater than one gallon per hour.
  - c) Install or deploy hand rails and mechanisms so the sump covers can be removed for a visual inspection of the sump. Provide water-proof lighting in the sumps or spotlights adequate to view the surface water in the sumps. Provide a mechanism to satisfactorily deploy and recover sorbent boom in the sumps at each Project.
- 6) Oil, fuel and chemical storage containers, containment areas, and conveyance systems
- a) Provide proper containment around each storage container (including transformers) or around a combination of storage containers as appropriate and agreed upon by Ecology. Proper containment equals the volume of the container plus 10 per cent.
  - b) Recalculate required containment areas to insure proper containment still exists after major equipment changes. Example: when converting from water cooled transformer to an air cooled unit, re-calculate oil volume and compare to containment area. Calculate containment volumes from *maximum* storage volumes, not normal oil level volumes.
  - c) Provide external oil level gauges for governor oil tanks, transformers and other oil tanks that contain over 100-gallons of oil. Provide appropriate level markings for these gauges. Provide a sign or other indicator at each tank, near the tank level gauge, that describes these level markings and the relationship of each inch vs. how many gallons (in the case of a glass tube type of gauge). Dial gauges must also describe oil volume in gallons or have a sign or other means provided at each reservoir that adequately describes dial movement in relation to gallons. Provide a sign or other indication that shows  $\frac{1}{4}$ ,  $\frac{1}{2}$ ,  $\frac{3}{4}$ , and full gauge readings or indications in gallons. If equipment must be placed in a special mode of operation, prior to level observance, this must also be posted. Example: wicker gate ram position or other hydraulic ram positions, prior to oil level reading. (See condition 4.8 of this Certification-Order under Monitoring and Reporting)

- d) Regularly check all fuel hoses, oil drums, oil or fuel transfer valves and fittings, etc, for drips and leaks. Maintain and properly store them to prevent spills into state waters. (See condition 4.8 of this Certification-Order under Monitoring and Reporting)
  - e) Do not refuel equipment within 50 feet of rivers, creeks, wetlands, or other waters of the state.
  - f) Provide full oil spill containment capacity plus 10 per cent when working on transformers and other equipment that might spill or drip oil.
  - g) Inspect containers once per week. Maintain container Inspection sheets to include: maximum container volume and an exact reading recording of the oil level by the staff/operator conducting the inspection. Weekly inspection readings must be consistent; provide training to the staff/operator to ensure consistent and accurate readings. (See condition 4.8 of this Certification-Order under Monitoring and Reporting)
  - h) Keep oil consumption records maintained on-site; provide these records to Ecology immediately upon request and the annual WQMP report.
  - i) In the event that the Project modifies the oil transfer operation to include hard-plumbing to reservoirs such as the governor oil tank from the oil tank room, or other extensive modifications, the Licensee must notify and receive approval from Ecology.
  - j) Contain wash water containing oils, grease, or other hazardous materials resulting from wash-down of equipment or working areas for proper disposal, and do not discharge this water into state waters.
- 7) Other
- a) Maintain site security at the Project site to reduce chance of oil spills.
  - b) Initiate, plan for, document, and train staff for the deployment of General Response Plan and boom strategies for each Project. Review and update as needed annually.

#### **4.7 PESTICIDE APPLICATIONS (SEE DEFINITION OF PESTICIDE IN EXHIBIT B)**

- 1) Prior to the application of pesticides to waters of the state, coverage under applicable Aquatic Pesticides Permit shall be obtained, and conformance with any other applicable state requirement such as SEPA, shall be attained.
- 2) Best Management Practices and other control measures for the application of pesticides to waters of the state must be addressed in an In-Water-Work Protection Plan. An appropriate water quality monitoring plan shall be developed prior to the application and shall be implemented for all related work.

- 3) Prior to the use of pesticides adjacent to waters of the state, the Licensee shall follow Best Management Practices to avoid the entry of such materials into waters of the state. Applicable Best Management Practices include, but are not limited to, such actions as hand application and avoiding drift of materials into the water.

#### **4.8 MONITORING AND REPORTING**

- 1) The water quality monitoring component of Cowlitz PUD's application to FERC is incorporated as a requirement of this Certification-Order and shall be followed except as further modified by the Certification-Order. Within 90 days of issuance of the new FERC license, the Licensee shall submit to Ecology for its review and approval a plan for any additional monitoring requirements set forth in this Certification-Order.
- 2) Monitoring pursuant to the requirements set forth in this Certification-Order shall begin as soon as practicable and in no event shall monitoring begin any later than one (1) year after issuance of the new FERC license for measures that do not specify a start date.
- 3) Representative water quality measurements shall be made for the parameters listed in Table 2 at the identified locations and frequencies. Further monitoring is required or may be required under compliance schedules or to respond to specific problems not identified at the time of the Certification-Order.

**Table 2. Water Quality Monitoring Schedule**

<b>Parameter</b>	<b>Location</b>	<b>Depths (ft)</b>	<b>Frequency</b>	<b>Duration</b>	<b>Condition No.</b>
Gravel	Bypass Reach	Bottom and sides	After the first gravel augmentation: Spring following first occurrence of spill of 5,000 cfs or greater into the bypass reach (Condition 4.1 Habitat phase 2)	One time	4.2.7 Phase 2 Habitat
	Bypass Reach	Bottom and sides	After the second gravel augmentation: Spring following first occurrence of spill of 5,000 cfs or greater into the bypass reach (Condition 4.1 Habitat phase 4)	One to time	4.2.7 Phase 4 Habitat
	Bypass Reach	Bottom, where gravel deposition is likely to occur in likely fish spawning areas	Spring following third and fourth occurrence of spill of 5,000 cfs or greater into the bypass reach (Condition 4.1 Habitat phase 5b).	One to three times	4.2.7 Phase 5b Habitat
Fish rearing and spawning	Both constructed channels and the bypass reach from river mile 44.1 to 47.3	n/a	Quarterly	One year. After first full year of operation of both constructed channels	4.2.8a Habitat
	Both constructed channels and the bypass reach from river mile 44.1 to 47.3	n/a	Quarterly	One year. Beginning in the fourth year after first full year of operation of both constructed channels	4.2.8b Habitat

	Both constructed channels and the bypass reach from river mile 44.1 to 47.3	n/a	Quarterly	One year. Beginning one year after each change in the combined flow schedule	4.2.8c Habitat
	Both constructed channels and the bypass reach from river mile 44.1 to 47.3	n/a	Quarterly	One year. After reintroduction of anadromous fish into Yale Lake	4.2.8d Habitat
	Both constructed channels and the bypass reach from river mile 44.1 to 47.3	n/a	Quarterly	One year. Beginning one year after construction of upstream fish passage at the Swift Projects.	4.2.8e Habitat
Redds	Both constructed channels and the bypass reach from river mile 44.1 to 47.3	bottom	Once every two weeks from October 1- November 15 and from February 1 to May 31	Ongoing	4.2.9 Habitat
Total Dissolved Gas (TDG)	Swift No. 2 tailrace in turbine water	>15	Hourly	One month during normal expected operation within one year after the new FERC license is issued	4.3.4
	Swift No. 2 tailrace in turbine water	>15	Hourly	One month following any operational or structural adjustments that could change the amount of air entrained	4.3.4

Temperature	Swift No. 2 forebay	>1, 3, 6, 10 15 20 25	Hourly throughout the expected hottest clear, sunny, calm periods of the year when Swift No. and Swift No. 2 are off-line for at least 48 hours	5, 48+-hour periods each year for at least two years beginning in 2007. If 5 off-line periods do not occur during one year, continue past the second year for a total of 10 sampling periods. Ongoing during the summer seasons if temperature criteria are exceeded until two years after the exceedances have been corrected.	4.4.1a 4.4.1b & 4.4.4
	Bypassed natural river just upstream and downstream from the mouth of Ole Creek	1	Hourly	Ongoing	4.4.4
Oil & Grease	Record amounts of oil, grease and hydraulic fluids used	n/a	Weekly	Ongoing for the term of the license	4.6.6h
	Sumps	Surface and bottom	At least weekly (visual) At least three months (test)	Ongoing for the term of the license	4.6.5a
	Oil tanks, transformers, other oil tanks >100 gallons	n/a	At least weekly	Ongoing for the term of the license	4.6.6c
	Fuel hoses, oil drums, oil & fuel transfer valves and fittings.	n/a	Weekly	Ongoing for the term of the license	4.6.6d
	Oil-water separators	n/a	Periodically test oil stop valves	Ongoing for the term of the license	4.6.3a



	Oil-water separators	n/a	Regularly prior to cleaning	Ongoing for the term of the license	4.6.3c
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- 4) All water quality monitoring shall meet accepted standards for data quality. The monitoring plans shall include monitoring and data evaluation procedures and objectives that ensure data quality. Data quality procedures shall be consistent with United States Environmental Protection Agency and Ecology guidance on this subject.
- 5) The monitoring plans shall be updated annually by amendment to reflect any changes in monitoring parameters, schedule, or methodology. These amendments, or a notification of no change, shall be included in the Annual Report further described below in condition 4.8.6 and in Section 14.2.6 of the Settlement Agreement. Ecology will provide its revisions and approval for the WQMP within three (3) months after receipt of an amendment.
- 6) Data from all water quality monitoring shall be summarized and reported in a format approved by Ecology and submitted annually. The monitoring report shall include sample dates, times, locations, and results. Any exceedances of numeric state water quality standards as well as any deviation from the flow requirements found in this Certification-Order shall be highlighted. The report shall be included in the Annual Report provided to FERC as described in Section 14.2.6 of the Settlement Agreement; provided that if Ecology determines that the format of the Annual Report does not meet Ecology's needs, the Licensee shall modify or supplement the report so that it is acceptable to Ecology. Data reports shall be submitted to Ecology's, Water Quality Program, Southwest Regional Office.
- 7) The Licensee may request to modify or eliminate parts of the monitoring program after a minimum of the ongoing monitoring requirements or a period of five (5) years of reliable data collection following issuance of the new license. Modifications to this monitoring schedule can be requested by submitting to Ecology reasons for the modifications along with a modified Water Quality Monitoring Plan.
- 8) A more rigorous water quality sampling program for the parameters listed in Table 2 or additional parameters may be required by Ecology if necessary to protect water quality in the future based on monitoring results, regulatory changes, changes in Project operations and/or requirements of TMDLs, or to otherwise provide reasonable assurance of compliance with state water quality standards.

## **Exhibit A**

### **Section 6.1 of the Settlement Agreement Concerning Relicensing of the Lewis River Hydroelectric Projects signed November 30, 2005**

#### **6.1 Flow Releases in the Bypass Reach; Constructed Channel.**

The Licensees shall provide flow releases to the reach of the Lewis River downstream of Swift No. 1 ending at Yale Reservoir, which parallels the Swift No. 2 canal (the “Bypass Reach”), for the duration of each New License subject to the terms and limitations in this Section 6.1. The Licensees shall not be required to schedule flow releases in any year that exceeds, in the aggregate for that year, 55,200 acre-feet (55,349 acre-feet in each leap year) (the “Annual Release Quantity”). These amounts are sufficient to supply the flows described in Section 6.1.3(g) below. The Licensees shall release the Annual Release Quantity at the following two release points (the “Release Points”): **(a)** from and as measured at the outflow from a water delivery structure to be constructed at the upstream end of the Bypass Reach (such water delivery structure being referred to as the “Upper Release Point”); and **(b)** to a constructed channel described in Section 6.1.3 below (defined in Section 6.1.3(a) as the “Constructed Channel”) from and as measured at the existing canal drain (the “Canal Drain”) that is located approximately one-third the length of the canal downstream of the Swift No. 1 tailrace. The monthly schedule of flow releases from these two Release Points are together referred to as the “Combined Flow Schedule,” which shall be determined as provided in Section 6.1.4 below.

##### **6.1.1 Commencement of Flow Releases from the Canal Drain.**

The Licensees shall commence flow releases from the Canal Drain at the time that Swift No. 2 reconstruction is complete. Prior to completion of the Upper Release Point, the Licensees shall only be obligated to release the maximum discharge from the Canal Drain, without modification, estimated to be 47 cfs.

##### **6.1.2 Construction of Upper Release Point.**

The Licensees shall determine the location to construct the Upper Release Point and shall design the necessary Project modifications to deliver water at the upstream end of the Bypass Reach by the first anniversary of the Effective Date. The Licensees shall commence construction of the Upper Release Point within six months after Issuance of the New Licenses for the Swift No. 1 Project or the Swift No. 2 Project, whichever is later, and all required Interests in Land and Permits have been obtained, and shall complete construction as soon as practicable.

##### **6.1.3 Constructed Channel.**

- a. Swift Bypass Habitat Channel Reconnaissance Study. The Licensees, in Consultation with the Parties, have commissioned a study, conducted by Northwest Hydraulic Consultants, Inc., dated December 9, 2003, entitled “Swift Bypass Habitat Channel Reconnaissance Study” (the “Feasibility Report”), attached as Schedule 6.1.3, concerning the biological and technical feasibility of developing a constructed channel

in the Bypass Reach downstream of the Swift No. 2 Canal Drain. The purpose of such a channel is to maximize the biological benefits of Canal Drain flows and to enhance connectivity with Yale Reservoir (the channel to be built and any measures undertaken in the lower Bypass Reach to connect that channel to Yale Reservoir shall be referred to collectively in this Agreement as the “Constructed Channel”).

- b. Funding for the Constructed Channel. The Licensees shall provide funds in a Tracking Account for the construction of the Constructed Channel, including the costs of design, Permitting, construction, and the acquisition of necessary Interests in Land (the “Construction Costs”), subject to the cost limitations provided below. Costs shall be shared by Licensees as follows: Cowlitz PUD shall fund or cause to be funded Construction Costs in an amount not to exceed \$182,000; PacifiCorp shall fund Construction Costs in an amount not to exceed \$818,000. In the event total Construction Costs are less than \$1 million:

(a) PacifiCorp shall make its portion of the remaining funds available (as Adjusted for Inflation until spent) for needed restoration or maintenance of the Constructed Channel beginning in year 19 after the Issuance of the New License for the Swift No. 1 Project; and (b) Cowlitz PUD shall make or cause to be made its portion of the remaining funds available (as Adjusted for Inflation until spent) for needed restoration or maintenance of the Constructed Channel beginning in year 21 after the Issuance of the New License for the Swift No. 2 Project. After PacifiCorp and Cowlitz PUD make such funds available, the funds shall be used for purposes of the Constructed Channel prior to the use of the other Aquatics Funds to support the Constructed Channel. The Licensees shall keep the ACC informed as to the progress of construction and shall notify the ACC within four working days after the Licensees determine that costs are likely to exceed \$1 million. If before or after construction begins, the Licensees expect the Construction Costs to exceed \$1 million, the Licensees shall inform the ACC and the ACC must decide whether to proceed, consistent with subsection (c) below, and draw the additional funds required from the Aquatics Fund or from other supplemental funds as may be available. If the ACC decides to proceed, all costs associated with the Constructed Channel in excess of \$1 million, including, but not limited to, construction, operational, and maintenance costs, shall be funded through the use of the Aquatics Fund (Section 7.5). Should the Constructed Channel be built, in no event shall more than \$20,000 per year on average be expended from the Aquatics Fund for maintenance of the Constructed Channel. The Parties other than the Licensees may pay such costs from third party funds that may be available to those Parties in lieu of using monies from the Aquatics Fund.

- c. Channel Design and Cost Estimate. The Licensees, in Consultation with the ACC, shall complete a design for the construction and maintenance of the Constructed Channel, including the estimated cost of such construction and maintenance,

consistent with the findings of the Feasibility Report as soon as practicable after the Effective Date. The design shall include any modifications to the lower Bypass Reach that are required to connect the channel to Yale Reservoir. The Licensees shall provide the ACC with a period of 90 days after receipt of the design from the Licensees to either approve the design or provide comments and suggestions for changes to the design. Following receipt of any comments and suggestions, the Licensees shall review and revise the design for the Constructed Channel and provide the revised design to the ACC for approval. Alternatively, the ACC (other than the Licensees), with the concurrence of the CIT and Yakama Nation, may determine at that time that the Constructed Channel should not be built. If the WDOE requires Licensees to build the Constructed Channel as a condition of the 401 Certifications for either or both of the Swift No. 1 and Swift No. 2 Projects, and if the ACC later decides, with the concurrence of the CIT and the Yakama Nation, that the Constructed Channel should not be built, then at the time of such decision by the ACC, any Party may object to such 401 Certification requirement as being Inconsistent with this Agreement and such Inconsistency shall be resolved in accordance with Section 15 below.

- d. **Permitting and Construction.** The Licensees shall obtain necessary Permits as soon as practicable following design approval by the ACC. The Licensees shall Consult with the ACC concerning construction contracts and methods to build the Constructed Channel. The Licensees shall commence and complete construction of the Constructed Channel as soon as practicable after the construction of the Upper Release Point is complete and all required Interests in Land and Permits have been obtained.
- e. **Maintenance of the Constructed Channel.** Licensees shall inspect the Constructed Channel at least once annually to determine whether maintenance may be required. After Consultation with the ACC, and using maintenance funds described in subsection b, above, the Licensees shall perform such maintenance as is determined to be necessary.
- f. **Flow Releases if Constructed Channel Is Not Constructed.** If the Constructed Channel is not constructed pursuant to Section 6.1.3.c, the Licensees shall implement the Annual Release Quantity pursuant to the Combined Flow Schedule provided under Section 6.1.4 below; provided that the Licensees, upon the recommendation of the ACC, may allocate all of the Combined Flow Schedule to the upstream end of the Bypass Reach.
- g. **Flow Releases During Construction of Channel.** During the construction of the Constructed Channel, the Licensees shall suspend discharges from the Canal Drain to facilitate construction activities. Licensees shall salvage fish during the dewatering of the channel, and any third-party cost associated with such efforts will be part of the

cost of the Constructed Channel. During construction of the Constructed Channel, discharges from the Upper Release Point will conform to the following schedule, consistent with the conditions described in Section 6.1.5:

- (i) July 1 through October 31, 60 cfs.
- (ii) November 1 through January 31, 100 cfs.
- (iii) February 1 through June 30, 75 cfs.

#### **6.1.4 Interim Flow Schedule; Combined Flow Schedule.**

- a. On or before the date the Constructed Channel and the Upper Release Point are both operational, the Licensees shall, in Consultation with and with the approval of the ACC, design an Interim Combined Flow Schedule that shall (1) allocate the Annual Release Quantity by month for a complete twelve-month period; (2) allocate the monthly quantities between the Upper Release Point and the Canal Drain for a complete twelve-month period, and; (3) provide for flow releases that remain unchanged during any given month, but may vary from month to month subject to the conditions in Section 6.1.5. The Licensees shall implement the Interim Combined Flow Schedule when both the Constructed Channel and the Upper Release Point are operational, continuing until replaced by the Combined Flow Schedule. The Licensees shall, during the following twelve months (the "Adjustment Period"), in Consultation with and with the approval of the ACC, make periodic adjustments to the Interim Combined Flow Schedule based on observation of discharges in the Constructed Channel and related biological considerations. Any such changes will conform to the conditions described in Section 6.1.5 below.
- b. During the final months of the Adjustment Period, the Licensees shall, in Consultation with and with the approval of the ACC, based on the experience and observations during the Adjustment Period, design a Combined Flow Schedule that shall (1) allocate the Annual Release Quantity by month; (2) allocate the monthly quantities between the Upper Release Point and the Canal Drain for a complete twelve month period; and (3) provide for flow releases that remain unchanged during any given month, but may vary from month to month, all subject to the conditions in Section 6.1.5. The Licensees shall implement such Combined Flow Schedule on or before the first anniversary of the date that the Constructed Channel and the Upper Release Point are both operational or approval of the ACC, whichever is later. The Combined Flow Schedule shall remain fixed for the duration of each New License, unless altered as described in Section 6.1.4.c below.
- c. The Combined Flow Schedule shall remain substantially unchanged during the New Licenses' terms; provided that, in response to significant physical changes in the channel (e.g., due to major spill events) or changes in biological priorities (e.g., species reintroduction or changes in species status), the Licensees, with the approval of the ACC, shall make changes to the Combined Flow Schedule based on clearly articulated biological or ecological justifications; provided further, however, that any such changes shall comply with the conditions in Section 6.1.5. The Licensees shall not be required to revise the Combined Flow Schedule pursuant to this subsection (c)

more frequently than once every five years, except in response to a significant physical alteration of the Constructed Channel due to spill events. The Parties other than the Licensees may not require any change to the Combined Flow Schedule in a manner that necessitates physical modification to the Projects or related facilities, including, but not limited to, modification of the Upper Release Point or the Canal Drain, or require additional Permits. The Licensees shall implement the revised Combined Flow Schedule no later than twelve months after the written approval by the ACC of such change.

#### **6.1.5 Conditions on Combined Flow Schedule.**

- a. The Annual Release Quantity as scheduled for a given calendar year shall not constrain the Licensees' ability to spill water at Swift No. 1 and at the Swift No. 2 Canal during high flow events, for operational reasons, or during emergency circumstances; however, water spilled during such events shall not be charged against the Annual Release Quantity; provided that such spill may be counted to the extent that it displaces scheduled releases from the Upper Release Point, but shall not be counted toward nor displace scheduled releases from the Canal Drain. During the time that spills displace scheduled releases from the Upper Release Point, the Licensees may in their discretion stop releases through the Upper Release Point;
- b. No more than a total of 17,078 acre-feet of the Annual Release Quantity (equivalent to an average of 70 cfs for the four-month period) may be scheduled during the period July 1st through October 31st, inclusive, and the maximum Combined Flow Schedule for those months shall not exceed 80 cfs in any month during the period July 1<sup>st</sup> through October 31st;
- c. During the period from November 1st through June 30th, the maximum Combined Flow Schedule in each month shall not exceed 100 cfs;
- d. The maximum flow that may be scheduled for release from the Canal Drain to the Constructed Channel shall be the maximum discharge capacity of the Canal Drain, without modification, estimated to be 47 cfs; and
- e. No portion of the Annual Release Quantity may be credited to a later year or otherwise carried over from year to year. All of the Annual Release Quantity shall be scheduled for release during each year.

#### **6.1.6 Response to Flow Reductions or Interruptions.**

The Parties intend that the Combined Flow Schedule, once established, shall be implemented throughout the terms of the New Licenses, without interruption. Certain events may cause the flow to be reduced or interrupted at either the Canal Drain or the Upper Release Point. The Licensees shall deal with such reductions or interruptions in flow as follows:

- a. If a non-emergency maintenance or replacement of release point facilities is required, and such activities could decrease or interrupt scheduled releases, the Licensees shall notify the Services, WDFW, and the ACC as far in advance as practicable. The

Licensees shall utilize temporary replacement facilities (e.g., pumps, siphons) for the period of potential flow reduction or interruption to maintain release of scheduled amounts of water.

- b. If emergency maintenance or replacement of release point facilities is required, or if any other event of Force Majeure occurs, and such activities or such event will decrease or interrupt scheduled releases, the Licensees shall notify the Services, WDFW, and the ACC as soon as practicable. The Licensees shall utilize temporary replacement facilities (e.g., pumps, siphons) for the period of potential flow reduction or interruption to maintain release of scheduled amounts of water to the extent practicable under such emergency or Force Majeure conditions. The Licensees shall take action to maintain or replace the release point facilities and to restore their normal operation as soon as is practicable.
- c. On or before the date that the Licensees begin delivering flows from the Upper Release Point under this Section 6.1, the Licensees shall prepare and deliver to the Services, WDFW, and the ACC plans for expeditious installation and operation of temporary replacement facilities for delivery of flows from the Canal Drain and Upper Release Point, respectively, to avoid or minimize reductions or interruptions in flow to the extent practicable under the circumstances described in paragraphs (a) and (b) above.
- d. If under paragraphs (a) and (b) above, discharge is reduced or interrupted at either release point, the Licensees shall document the duration (in days or hours), rate (in cfs), and volume (in acre-feet) of flow reduction to the extent practicable, and shall provide such documentation to the Services, WDFW, and the ACC.

#### **6.1.7 Clean Water Act Certification.**

WDFW shall support the Annual Release Quantity and Combined Flow Schedule described in this Section 6.1 (with or without the Constructed Channel) by filing supporting comments and recommendations with WDOE. WDFW further agrees that the Annual Release Quantity and Combined Flow Schedule are consistent with WDFW's biological and other objectives. The Licensees' applications for Clean Water Act certifications may or may not include reference to the Constructed Channel. A decision by the respective Licensees to not include the Constructed Channel in Licensee applications for 401 Certifications shall not discharge Licensee obligations to construct the Constructed Channel in accordance with Section 6.1.3, including the obligation to obtain necessary Permits. All Parties shall support or not oppose the Licensees' applications for Clean Water Act certifications, or the final certificates, relating to flows in the Bypass Reach that are consistent with this Section 6.1.

## **Exhibit B**

### **Definitions**

**ACC** – Aquatic Coordination Committee

**BMPs** – Best Management Practices to reduce pollution

**CWQPP** – Construction Water Quality Protection Plan – necessary for all construction Projects in, over, or near water.

**FERC** – Federal Energy Regulatory Commission

**FWPCA** – Federal Water Pollution Control Act

**HPA** – Hydraulic Project Approval

**IWPP** – In Water Work Protection Plan. Part of the CWQPP as described above. This is for work in the water—such as boat ramps or cement work in the water. This does not apply inside the dam when before beginning the Project, the water can be completely removed.

**MSL** – Mean Sea Level

**NTU** – Nephelometric Turbidity Units

**Pesticide** –

- a) Any substance or mixture of substances intended to prevent, destroy, control, repel, or mitigate any insect, rodent, snail, slug, fungus, weed, and any other form of plant or animal life or virus, except virus on or in a living person or other animal which is normally considered to be a pest or which the director may declare to be a pest;
- b) Any substance or mixture of substances intended to be used as a plant regulator, defoliant or desiccant; and
- c) Any spray adjuvant, such as a wetting agent, spreading agent, deposit builder, adhesive, emulsifying agent, deflocculating agent, water modifier, or similar agent with or without toxic properties of its own intended to be used with any pesticide as an aid to the application or effect thereof, and sold in a package or container separate from that of the pesticide with which it is to be used.

**RCW** – Revised Code of Washington

**RM** – River Mile

**SWPPP** – Stormwater Pollution Prevention Plan –Part of the CWQPP as described above. This is to prevent polluted stormwater from entering the reservoir or river.

**TDG** – Total Dissolved Gas

**TMDL** – Total Maximum Daily Load

**TWQAP** – Temperature Water Quality Attainment Plan

**USC** – United States Code

**USDA-FS** – Forest Service of the United States Department of Agriculture

**USGS** – United States Geological Survey



**USFWS** – United States Fish and Wildlife Service

**WAC** – Washington Administration Code

**WQAP** – Water Quality

**WQMP** – Water Quality Monitoring Plan

**WDFW** – Washington Department of Fish and Wildlife

**WQS** – Water Quality Standards Rule, WAC 173 201A. For further descriptions of terms, refer to the definitions in this rule

## APPENDIX C

### **Modified Fishway Prescriptions filed by the Department of Commerce under Section 18 of the Federal Power Act for the Swift No. 2 Project, FERC No. 2213**

February 14, 2006

The following prescriptions were developed in response to the Settlement Agreement filed for the Projects with the Commission on December 1, 2004. These modified prescriptions are intended to implement the Settlement Agreement with respect to anadromous fish resources.

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

These mandatory fishway prescriptions are based on the best available biological and engineering information available. NMFS’ prescriptions for the Merwin, Yale, Swift No. 1, and Swift No. 2 Projects include structures for upstream and downstream passage, and project operations, performance standards, outcome goals, and other measures to ensure effective passage. The facilities, measures, and other related provisions were developed in consultation with all parties to the Settlement Agreement, as part of this relicensing proceeding. Each prescription is based on substantial evidence contained in the record. Because these prescriptions are the product of settlement, the rationale for each provision is tied to the rationale for the overall agreement. Where appropriate, additional rationale has been provided in previous filings. NMFS has carefully reviewed these prescriptions, and considers them to fall fully within the scope of its Section 18 authority because they are measures needed to ensure the effectiveness of fishway structures, facilities, or devices.

NMFS hereby prescribes the following license conditions for the construction, operation, and maintenance of upstream and downstream fishways to provide safe, timely, and effective passage around the Merwin, Yale, and Swift No. 1, and 2 Projects. Recognizing that the following prescriptions are consistent with the Settlement Agreement, NMFS respectfully requests, pursuant to its authority under Section 18 of the

FPA, that the Commission incorporate into the Project licenses, in their entirety and without modification, the prescriptions included herein.

## **Article 1. Prescription for Anadromous Fish Reintroduction Outcome Goals**

Regarding the stocks of Chinook, steelhead, and coho that are being transported under the Settlement Agreement, the Licensee must implement the relevant PM&E Measures that are the Licensee's obligations in the Settlement Agreement and the Licensee, together with the licensees for the Merwin (P-935), Yale (P-2071), and Swift No. 1 (P-2111) projects must implement the relevant PM&E Measures that are the shared obligations of the licensees in the Settlement Agreement to achieve the Reintroduction Outcome Goal as described in the Settlement Agreement. The "Reintroduction Outcome Goal" is to achieve genetically viable, self-sustaining, naturally reproducing, harvestable populations above Merwin Dam (P-935) greater than minimum viable populations. "Harvest" includes all forms of harvest including, without limitation, commercial, tribal, and recreational. Notwithstanding the previous sentences, the Licensee shall not be responsible for limiting factors that are not related to Swift No. 2 (P-2213) Project effects, e.g. harvest. These Reintroduction Outcome Goals are separate from and have no relationship to the targets listed under Section 8 of the Settlement Agreement relating to numbers of returning hatchery fish.

### **1.1 Monitoring and Evaluation**

The Licensee, together with the licensees for the Merwin (P-935), Yale (P-2071) and Swift No. 1 (P-2111) projects, and in Consultation with the Aquatics Coordination Committee (ACC) (including at least the Services) and with the final approval of the Services, must monitor progress for achieving Reintroduction Outcome Goals periodically as set forth in Sections 3.2 and 9 of the Settlement Agreement. The results of such monitoring must be included in the reports on monitoring and evaluation to be provided to the Commission by the Licensee, together with the licensees for the Merwin (P-935), Yale (P-2071) and Swift No. 1 (P-2111) projects, under Section 9.1 of the Settlement Agreement. The Licensee's monitoring must rely on the work of regional recovery groups (e.g., the Technical Recovery Team and the Lower Columbia Fish Recovery Board) relating to North Fork Lewis River populations to the extent possible, in combination with the data gathered by the Licensee, and the licensees for the Merwin (P-935), Yale (P-2071) and Swift No. 1 (P-2111) projects, in accordance with the Settlement Agreement. As contemplated by the Settlement Agreement, the Licensee, must supplement such work if needed to determine whether the Reintroduction Outcome Goals have been achieved or whether they are on track to being achieved on a timely basis.

### **1.2 Phase II Status Check**

If the Services determine, on or after the later of: (a) the 37th anniversary of

Issuance of the last of the Licenses for the Swift No. 2, Swift No. 1 (P-2111), Yale (P-2071) and Merwin (P-935) projects, or (b) the seventh year after the Phase I Status Check as described in Section 3.4 of the Settlement Agreement, using the approach developed pursuant to Section 3.1.1 of the Settlement Agreement (such determination process is referred to as the “Phase II Status Check”), that the Reintroduction Outcome Goals have been achieved, the Licensee, together with the licensees for the Swift No. 1 (P-2111), Yale (P-2071) and Merwin (P-935) projects, must continue to carry out the relevant measures provided in Sections 4 through 9 of the Settlement Agreement, including adjusting and modifying the Swift Upstream Facility as needed to meet relevant performance standards as provided in Section 4.1.6 of the Settlement Agreement.

If the Services determine, on or after the later of: (a) the 37th anniversary of issuance of the last of the Licenses for the Swift No. 2, Swift No. 1 (P-2111), Yale (P-2071) and Merwin (P-935) projects, or (b) the seventh year after the Phase I Status Check using the approach developed pursuant to Section 3.1.1 of the Settlement Agreement (such determination process is referred to as the “Phase II Status Check”), that any of the Reintroduction Outcome Goals have not been achieved, and the limiting factors analysis performed as provided in the licenses for the Merwin (P-935), Yale (P-2071) and Swift No. 1 (P-2111) projects, concludes, for all Reintroduction Outcome Goals not being met, that all significant limiting factors contributing to the failure to meet such goals are unrelated to Project effects, the Licensee, together with the licensees for the Swift No. 1 (P-2111), Yale (P-2071) and Merwin (P-935) projects, must continue carrying out the relevant measures contained in Sections 4 through 9 of the Settlement Agreement including adjusting and modifying the Swift Upstream Facility as provided in Section 4.1.6 of the Settlement Agreement, but shall not be obligated to implement any additional measures. Examples of factors unrelated to project effects include but are not limited to, harvest, upstream of Merwin off-Project habitat conditions (e.g. degradations in habitat due to forest management practices and natural catastrophic events), and ocean conditions. If the limiting factors analysis performed as provided in the licenses for the Merwin (P-935), Yale (P-2071) and Swift No. 1 (P-2111) projects, concludes that a Project effect is a significant limiting factor in any Reintroduction Outcome Goal not being met, then in addition to continuing carrying out the relevant measures contained in Sections 4 through 9 of the Settlement Agreement, including Facility Adjustments and Facility Modifications as provided in Section 4.1.6 of the Settlement Agreement, the Licensee, together with the licensees for the Merwin (P-935), Yale (P-2071) and Swift No. 1 (P-2111) projects, must Consult with the Services to determine what further actions by the Licensee together with the licensees for the Merwin (P-935), Yale (P-2071) and Swift No. 1 (P-2111) projects, would be necessary to meet Reintroduction Outcome Goals pursuant to Section 3.5.2.b of the Settlement Agreement. Such actions may include, without limitation, consideration of structural or operational changes with respect to the Swift No. 2 generating facilities or canal or construction of new or replacement passage facilities.

## **Article 2. Prescription for Fish Passage Facilities Design**

To provide for the safe, timely and effective passage past the Project of upstream migrating salmonids, the Licensee, together with the licensee for Swift No. 1 (P-2111), shall develop and implement the Swift Upstream Facility in accordance with, and subject to the limitations included in, all of the relevant provisions of the Settlement Agreement.

### **2.1 Design Review**

Except as otherwise provided under Section 4.1.9 of the Settlement Agreement, the Licensee, together with the licensee for Swift No. 1 (P-2111), must design the Swift Upstream Facility to meet the performance standard targets set out in Section 4.1 .4.b of the Settlement Agreement, as applicable. The Licensee, together with the licensee for Swift No. 1 (P-2111), must use the best available technology for the type of passage facility being constructed, and design the passage facility to provide flexibility for subsequent expansion or Facility Adjustments, if needed, to meet performance standards. A fish passage facility may include duplication of some components (for example, multiple entrances) and still be considered a single passage facility. The Licensee, together with the licensee for Swift No. 1 (P-2111), must coordinate with and provide 30 percent and 60 percent completed preliminary designs for review and comment to the Services and WDFW. The Licensee, together with the licensee for Swift No. 1 (P-2111), must notify the ACC when design work has begun, and provide the 30 percent and 60 percent preliminary designs to any other Party to the Settlement Agreement at the Party's request. The Licensee, together with the licensee for Swift No. 1 (P-2111), must provide the Services and WDFW 45 days to provide their comments. The Licensee, together with the licensee for Swift No. 1 (P-2111), must submit the 90 percent preliminary designs with the relevant engineering, hydraulic, and biological work to the ACC (including at least the Services) at the times set forth in the Settlement Agreement. The Licensee, together with the licensee for Swift No. 1 (P-2111), must provide the ACC (including at least the Services) 45 days to provide its comments on the 90 percent preliminary designs and must finalize the designs in Consultation with the ACC (including at least the Services) and with the approval of the Services. The Licensee, together with the licensee for Swift No. 1 (P-2111), must consider and address in writing those written comments provided by the members of the ACC (including at least the Services) when submitting final designs to the Services for approval.

## **Article 3. Prescription for Permits and Time for Construction**

Upon approval of the Swift Upstream Facility design by the Commission, the Licensee, together with the licensee for Swift No. 1 (P-2111), must diligently and expeditiously acquire all required Permits. The time by which such passage facility must be placed in operation is set forth in the Settlement Agreement.

## **Article 4. Prescription for Performance Standards for Fish Passage**

The Licensee, together with the licensee for Swift No. 1 (P-2111), must provide for the safe, timely, and effective passage of salmonids being transported past the Project as described in the Settlement Agreement. Specific life stages described below have quantitative standards. The Licensee, together with the licensee for Swift No. 1 (P-2111), must construct and provide for the operation and maintenance of the Swift Upstream Facility that collects all life stages of salmonids that are present at the facility, and functions during all flows and during all seasons; except to the extent it is infeasible due to flood events that require spill that could not be reasonably accommodated by the passage facility.

The Licensee must employ the following definitions in carrying out and monitoring the performance standards:

- **Adult Trap Efficiency (“ATE”)**: The percentage of adult Chinook, coho, steelhead, bull trout, and sea-run cutthroat that are actively migrating to a location above the trap and that are collected by the trap.
- **Injury**: Visible trauma (including, but not limited to, hemorrhaging, open wounds without fungus growth, gill damage, bruising greater than 0.5 cm in diameter, etc.), loss of equilibrium, or greater than 20 percent descaling. “Descaling” is defined as the sum of the area on one side of the fish that shows recent scale loss. This does not include areas where scales have regenerated or fungus has grown.
- **Overall Downstream Survival (“ODS”)**: The percentage of juvenile anadromous fish of each of the species to be transported that enter the reservoirs from natal streams and that survive to enter the Lewis River below Merwin Dam by collection, transport, and release via the juvenile fish passage system, passage via turbines, or some combination thereof, calculated as provided in Schedule 4.1.4 of the Settlement Agreement.
- **Upstream Passage Survival (“UPS”)**: Percentage of adult fish of each of the species to be transported that are collected that survive the upstream trapping-and-transport process. For sea-run cutthroat and bull trout, “adult” means fish greater than 13 inches in length.

### **4.1 Fish Passage Performance Standards for Upstream Facilities**

For each species, the Licensee, together with the licensee for Swift No. 1 (P-2111), must achieve the following overall performance standards for fish passage: UPS of greater than or equal to 99.5 percent; and ATE to be established as described in the Settlement Agreement. If the performance standards for UPS and/or ATE are not achieved within a reasonable time, the Licensee, together with the licensee for Swift No. 1 (P-2111), must make Facility Adjustments and Modifications, as described in Section 4.1.6 of the Settlement Agreement.

## **4.2 Passage Facility Design Performance Standards for Salmonids**

The Licensee, together with the licensee for Swift No. 1 (P-2111), must design and construct the Swift Upstream Facility to achieve the UPS equal to or greater than 99.5 percent and the ATE to be established as described in the Settlement Agreement.

## **4.3 Adult Trap Efficiency for Salmonids**

As soon as practicable, and following Consultation described by the Settlement Agreement, the Licensee, together with the licensee for Swift No. 1 (P-2111), must develop an ATE performance standard for the Swift Upstream Facility, to ensure the safe, timely, and effective passage of adult salmonids. Until such time as the standard has been developed, the Licensee must use NOAA Fisheries fish passage guidelines: *Anadromous Salmonid Passage Facility Guidelines and Criteria*, NMFS (Jan. 31, 2004). The Licensee, together with the licensee for Swift No. 1 (P-2111), must consider without limitation entry rate, fall back, crowding at the entrance, delay, and abandonment of the trap area. When performance standards for ATE have been developed, the Licensee, together with the licensee for Swift No. 1 (P-2111), must submit the standards to the Commission and such standards must be used to judge performance for the Swift Upstream Facility when considering Facility Adjustments or Facility Modifications.

## **4.4 Monitoring and Evaluation of Performance Standards**

As described in the Settlement Agreement, once the Swift Upstream Facility is constructed and placed in operation, and after each Facility Adjustment or Facility Modification, the Licensee, together with the licensee for Swift No. 1 (P-2111), must evaluate, in Consultation with the ACC (including at least the Services) and with the approval of the Services, whether performance standards are being met for each of the species designated in the Settlement Agreement, in accordance with the monitoring and evaluation plan described in Section 9 of the Settlement Agreement.

## **4.5 Adjustments or Modifications to Passage Facilities to Achieve Performance Standards**

A “Facility Adjustment” means a physical passage facility upgrade, improvement, or addition that was part of the original design of the passage facility, or an adjustment to the fish passage facility or its operations. A “Facility Modification” means a physical alteration or addition to a physical passage facility that requires a new design. When making Facility Modifications, the Licensee, together with the licensee for Swift No. 1 (P-2111), must follow the design process set out in Article 2, in Consultation with the ACC (including at least the Services). Whenever any Facility Adjustment or Facility Modification is completed, the Licensee, together with the licensee for Swift No. 1 (P-

2111), must test the operation of the Swift Upstream Facility for a reasonable time to determine the effectiveness of such adjustment or modification. At the direction of the Services and after any required Commission approvals and obtaining all required Permits, the Licensee, together with the licensee for Swift No. 1 (P-2111), must make Facility Adjustments and Facility Modifications to the Swift Upstream Facility to achieve the relevant performance standards for each of the species designated in the Settlement Agreement as soon as practicable.

For Transported Species, if UPS and/or ATE are not being met, then the Licensee, together with the licensee for Swift No. 1 (P-2111), will make Facility Adjustments or Facility Modifications to the Swift Upstream Facility as directed by the Services, consistent with the Settlement Agreement.

Except as required in a proceeding initiated with Section 15.3.2 of the Settlement Agreement, or as provided in Section 3.5.2.b. of the Settlement Agreement, the Licensee shall not be required to (1) make structural or operational changes with respect to its generating facilities or canal to achieve standards, (2) replace any fish passage facility with another passage facility, or (3) install additional collection and transport facilities or alternative fish passage facilities beyond those required by the Settlement Agreement. This Article is not intended to alter specific obligations provided under this License or the Settlement Agreement, including, without limitation, operational constraints required under Settlement Agreement Section 4.9.1.

#### **Article 5. Prescription for Species to be Transported**

For purposes of all fish passage provisions contained herein, the Licensee, together with the licensee for Swift No. 1 (P-2111), with respect to the Swift Upstream Facility, must only provide for the transport of spring Chinook, winter steelhead, coho, bull trout, and sea-run cutthroat. Notwithstanding the preceding sentence, the Licensee, together with the licensee for Swift No. 1 (P-2111), after Consultation with the ACC (including at least the Services); and if directed by the Services, must also provide for the transport of fall Chinook or summer steelhead that enter the Swift Upstream Facility.

#### **Article 6. Prescription for Upstream Transport Before Full Adult Fish Passage**

Unless and until alternative technologies are implemented, the Licensee, together with the licensee for Swift No. 1 (P-2111), must provide for the transport by truck of all Transported Species collected at the Swift Upstream Facility. Once the Merwin Upstream Transport Facility is completed as provided in the Merwin Project (P-935) license, and for so long as trucks are used, the Licensee, together with the licensee for Swift No. 1 (P-2111), must provide for transport at the Swift Upstream Facility according to the Upstream Transport Plan described in Section 4.1.8.c of the Settlement Agreement.



## **Article 7. Prescription for Upstream Transport After Full Adult Fish Passage**

On or before the 13th anniversary of the Issuance of the last of the Licenses for Swift No. 2, Swift No. 1 (P-2111), Yale (P-2071), and Merwin (P-935), the Licensee, together with the licensee for Swift No. 1 (P-2111), must evaluate alternative adult fish transport technologies (such as fish trains, cable lifts, or other new technologies) at the Swift Upstream Facility that allow transportation of the fish with the least practicable amount of handling or other stress-inducing actions, considering the need for sorting fish. The Licensee, together with the licensee for Swift No. 1 (P-2111), must implement such technologies provided that (1) alternative technologies are determined, by engineers qualified in fish passage and designated respectively by WDFW, USFWS, NOAA Fisheries, the Licensee, and the licensee for Swift No. 1 (P-2111), to be feasible and effective in transporting fish over dam facilities; (2) the Services determine that such technologies are suitable for meeting the Services' fish passage goals and the biological benefits are expected to be equal to or greater than the benefits of trap-and-transport by truck; and (3) the costs of the selected technology (considering both initial capital cost and ongoing operational and maintenance costs) do not significantly exceed the costs of transporting fish by truck. If there is a disagreement with the engineers' determination under (1) above, the Licensee, together with the licensee for Swift No. 1 (P-2111), shall allow for the resolution of disputes in accordance with the ADR Procedures in Section 15.10 of the Settlement Agreement. The Licensee, together with the licensee for Swift No. 1 (P-2111), must begin carrying out such technologies after acquisition of all required Permits according to the schedule set forth in the Settlement Agreement. The selection of such technologies and selection of final designs by the Licensee, together with the licensee for Swift No. 1 (P-2111), must be made with the approval of the Services after Consultation with the ACC (including at least the Services), pursuant to Section 4.1.2 of the Settlement Agreement. The costs for such alternate technologies must be considered cumulatively for the Swift No. 2 Project (P-2213), and the Swift No. 1 (P-2111), Yale (P-2071) and Merwin (P-935) Projects, so that a cost savings from alternate technology at one Project could offset a cost increase for such technology at another Project, compared to trapping and transporting by truck. If costs are determined to significantly exceed the cost of transporting fish by truck, the Parties to the Settlement Agreement may make reasonable efforts to find more cost-effective facility designs that will achieve the same or greater biological benefit compared to trap-and-transport by truck. If (i) after due comparison of the costs of initial capital and ongoing operations and maintenance through the remaining term of the License of trapping and transporting by truck versus such costs of an alternative technology for upstream passage it appears that such alternate technologies would not be implemented because of increased costs; and (ii) any Party (other than the Licensee or the licensees for the Swift No. 1 (P-2111), Yale (P-2071) or Merwin (P-935) projects): (A) identifies alternate sources of funding, (B) provides a guarantee of payment acceptable to the Licensee and the licensee for Swift No. 1 (P-2111), of the difference in capital and ongoing operations and maintenance costs over the remaining term of the License between trap-and-transport and such alternative

technology, and (C) provides such funding without additional conditions unacceptable to the Licensee and the licensee for Swift No. 1 (P-2111), express or implied; then the Licensee, together with the licensee for Swift No. 1 (P-2111), shall implement such technologies after acquisition of all required Permits according to the schedule set forth in Section 4.8 of the Settlement Agreement for the Swift Upstream Facility. If alternative methods are not used at Swift Upstream Facility because they do not meet the standards of Section 4.1.8 of the Settlement Agreement, then the Licensee, together with the licensee for Swift No. 1 (P-2111), must continue to use trap and transport by truck at such facility.

### **7.1 Upstream Transport Plan**

The Licensee, together with the licensees for Swift No. 1 (P-2111), Merwin (P-935) and Yale (P-2071), must modify the Upstream Transport Plan prepared in accordance with the licenses for the Merwin (P-935) and Yale (P-2071) projects in Consultation with the ACC (including at least the Services) and with the approval of the Services, subject to Section 15.14 of the Settlement Agreement, to address transport from the Swift Upstream Facility if trucking is to be used for transport from that facility. The plan must describe the frequency and procedures to achieve safe, timely and effective passage. The Licensee, together with the licensee for Swift No. 1 (P-2111), must provide for the transport of fish at a minimum frequency of once daily, or more if necessary, to achieve safe, timely and effective passage. The Licensee, together with the licensees for Merwin (P-935) and Yale (P-2071) and Swift No. 1 (P-2111), must submit the modified Upstream Transport Plan to the Commission before completion of the Swift Upstream Facility.

### **Article 8. Prescription for Upstream Passage Facility at the Swift Projects**

Unless otherwise directed by the Services pursuant to Section 4.1.9 of the Settlement Agreement, on or before the 17th anniversary of the Issuance of the License for the Swift No. 1 Project (P-2111) or the Swift No. 2 Project (P-2213), whichever is later, the Licensee, together with the licensee for Swift No. 1 (P-2111), must complete construction and provide for the operation of an adult trap and transport facility at the single best site above Yale Lake, based on biological and hydrological factors, to collect, sort, and transport upstream-migrating adult Transported Anadromous Species to above the Swift No. 1 Dam (P-2111) (the “Swift Upstream Facility”), except that the USFWS may direct that bull trout be transported to a different location. The specific location of the Swift Upstream Facility must be determined by the Licensee, together with the licensee for Swift No. 1 (P-2111), in Consultation with the ACC (including at least the Services) and with the approval of the Services subject to Section 15.14 of the Settlement Agreement, on or before the 12th anniversary of Issuance of the License for the Swift No. 1 Project (P-2111) or the Swift No.2 Project (P-2213), whichever is later. The Licensee, together with the licensee for Swift No. 1 (P-2111), must provide for the operation of the

Swift Upstream Facility for the remaining term of the License for the Swift No. 2 Project (P-2213) unless the Services determine, after discussion with the ACC, that operation of the Swift Upstream Facility should not continue. If the Services make such determination after the passage facility is operational, the Licensee, together with the licensee for Swift No. 1 (P-2111), shall notify the Commission of such decision. The Licensee, together with the Licensee for Swift No. 1 (P-2111), must provide 90 percent preliminary designs to the ACC (including at least the Services) on or before the 14th anniversary of the Issuance of the License for the Swift No. 1 Project (P-2111) or the Swift No. 2 Project (P-2213), whichever is later, including any engineering, hydraulic and biological information considered by the design team. Subject to Section 15.14 of the Settlement Agreement, the Licensee, together with the licensee for Swift No. 1 (P-2111), must submit final designs to the Commission upon approval by the Services, but not later than six months after providing preliminary designs to the ACC. If these facilities do not function as well to collect bull trout as the interim collection method based on effectiveness monitoring, as determined by the USFWS, Licensee, together with the licensee for Swift No. 1 (P-2111), shall continue the interim collection method established in Section 4.9 of the Settlement Agreement.

#### **Article 9. Prescription for Monitoring and Evaluation Plan**

Pursuant to Section 9.1 of the Settlement Agreement, the Licensee, together with the licensees for the Merwin (P-935), Yale (P-2071) and Swift No. 1 (P-2111) projects, must complete a master monitoring and evaluation plan (the “M&E Plan”) in Consultation with the ACC (including at least the Services) to carry out a program to monitor and evaluate the effectiveness of aquatic PM&E Measures contained in the Settlement Agreement and to assess achievement of the Reintroduction Outcome Goals as provided in the Settlement Agreement.

The M&E Plan must address the tasks, and the methods, frequency and duration of those tasks, necessary to accomplish the monitoring and evaluation items described below. The Licensee, together with the licensees for the Merwin (P-935), Yale (P-2071) and Swift No. 1 (P-2111) projects, must provide a draft M&E Plan to the ACC (including at least the Services) as described in Section 9.1 of the Settlement Agreement. The Licensee, together with the licensees for the Merwin (P-935), Yale (P-2071) and Swift No. 1 (P-2111) projects, must allow the ACC (including at least the Services) a period of 90 days to provide comments on the draft M&E Plan as part of such Consultation. The Services must have final approval authority over elements of the M&E Plan relating to fish passage or species listed under the ESA, subject to Section 15.14 of the Settlement Agreement. The Licensee, together with the licensees for the Merwin (P-935), Yale (P-2071) and Swift No. 1 (P-2111) projects, shall finalize the M&E Plan and submit it to the Commission for approval within 90 days after the close of the ACC comment period and must implement the M&E Plan upon approval by the Commission. For the purposes of this Article 9 and Section 9 of the Settlement Agreement, the Licensee must prepare

elements of the M&E Plan to be performed within the boundaries of Swift No. 2 and must implement such elements. As provided in the licenses for the Merwin (P-935), Yale (P-2071) and Swift No. 1 (P-2111) projects, the licensee for those projects must prepare and implement all other elements of the M&E Plan. As provided in the Settlement Agreement, the Licensee, and the licensees for the Merwin (P-935), Yale (P-2071) and Swift No. 1 (P-2111) projects, must cooperate to prepare a single M&E Plan and a single annual report to the Commission, but if that is not successful, the Licensee must submit its own plan and annual report as required under Section 9 of the Settlement Agreement.

The Licensee, together with the licensees for the Merwin (P-935), Yale (P-2071) and Swift No. 1 (P-2111) projects, must provide to the ACC (including at least the Services) the results of the monitoring and evaluations under the M&E Plan as part of the Licensee's annual report, which must be prepared in accordance with the Settlement Agreement. The Licensee, together with the licensees for the Merwin (P-935), Yale (P-2071) and Swift No. 1 (P-2111) projects, must also include in such annual report a description of the monitoring and evaluation tasks to be completed during the following year. The Licensee, together with the licensees for the Merwin (P-935), Yale (P-2071) and Swift No. 1 (P-2111) projects, must Consult with the ACC (including at least the

Services) as necessary, but no less often than every five years, to determine if modifications to the M&E Plan are warranted. As a result of such Consultation, the Licensee, together with the licensees for the Merwin (P-935), Yale (P-2071) and Swift No. 1 (P-2111) projects, must propose changes to the M&E Plan to improve the effectiveness of monitoring and evaluation. The Services must have final approval of changes to the M&E Plan, with respect to fish passage or species listed under the ESA, subject to Section 15.14 of the Settlement Agreement. The Licensee, together with the licensees for the Merwin (P-935), Yale (P-2071) and Swift No. 1 (P-2111) projects, must carry out any changes to the M&E Plan as soon as they have been approved by the Commission.

The Licensee, together with the licensees for the Merwin (P-935), Yale (P-2071) and Swift No. 1 (P-2111) projects, must amend the M&E Plan in Consultation with the ACC (including at least the Services), to incorporate newly constructed facilities and other aquatic PM&E Measures to be carried out during the term of this License. The Licensee, together with the licensees for the Merwin (P-935), Yale (P-2071) and Swift No. 1 (P-2111) projects, must provide a draft revised M&E Plan relating to facilities to be constructed in the future, and other aquatic PM&E Measures to be carried out in the future, to the ACC (including at least the Services) not less than two years before completing construction of such facilities or implementation of such measures. The Licensee, together with the licensees for the Merwin (P-935), Yale (P-2071) and Swift No. 1 (P-2111) projects, must allow the ACC (including at least the Services) a period of 90 days to provide comments on the draft revised M&E Plan as part of such Consultation. The Services must have final approval authority for the revised M&E Plan relating to fish

passage or species listed under the ESA, subject to Section 15.14 of the Settlement Agreement. The Licensee, together with the licensees for the Merwin (P-935), Yale (P-2071) and Swift No. 1 (P-2111) projects, must finalize the revised M&E Plan and submit it to the Commission for approval within 90 days after the close of the ACC comment period. The Licensee, together with the licensees for the Merwin (P-935), Yale (P-2071) and Swift No. 1 (P-2111) projects, must carry out any amendments to the M&E Plan as soon as they have been approved by the Commission.

The following provisions provide guidance regarding elements to be included in the original M&E Plan, and in subsequent amendments to the M&E Plan, relating to specific passage facilities and other aquatic measures. The monitoring and evaluation tasks described in Section 9 of the Settlement Agreement, as applicable to the Swift No. 2 Project (P-2213), shall be incorporated into and made part of the M&E Plan. The Licensee, together with the licensees for the Merwin (P-935), Yale (P-2071), and Swift No. 1 (P-2111) projects, may revise and adapt the monitoring and evaluation tasks described in Section 9 of the Settlement Agreement, in Consultation with the ACC (including at least the Services) and with the approval of the Services. The Licensee, together with the licensees for the Merwin (P-935), Yale (P-2071) and Swift No. 1 (P-2111) projects, shall allow the ACC a period of 90 days to provide comments on revisions to the draft M&E Plan as part of such Consultation. The Services shall have final approval authority for the revisions to the M&E Plan relating to fish passage or species listed under the ESA, subject to Section 15.14 of the Settlement Agreement. The Licensee, together with the licensees for the Merwin (P-935), Yale (P-2071) and Swift No. 1 (P-2111) projects, shall finalize any revisions to the M&E Plan and submit them to the Commission for approval within 90 days after the close of the ACC comment period. The Licensee, together with the licensees for the Merwin (P-935), Yale (P-2071) and Swift No. 1 (P-2111) projects, shall implement the revised M&E Plan upon approval by the Commission.

The Licensee, together with the licensees for the Merwin (P-935), Yale (P-2071) and Swift No. 1 (P-2111) projects, must include in the M&E Plan elements to determine whether the Reintroduction Outcome Goals have been achieved provided that for such purposes the Licensee shall be required to monitor and evaluate only elements that are under the control of the Licensee (such as the functioning of the Swift Upstream Facility) and that are affected by the Project. The Licensee shall not be required, without its express written consent, to conduct monitoring that is the obligation of a third party under applicable law or permits (including, but not limited to, marine harvest).

## **9.1 Monitoring and Evaluation Related to Fish Passage**

The Licensee, together with the licensee for Swift No. 1 (P-2111) with respect to the Swift Upstream Facility, must include in the M&E Plan the following monitoring and evaluation elements with respect to the Swift No. 2 Project (P-2213) and the Swift

Upstream Facility for Chinook, steelhead, coho, bull trout and sea-run cutthroat:

(a) Reservoir Survival of juvenile fish, as contemplated in the Settlement Agreement.

(b) Turbine Entrainment (“TE”), as contemplated in the Settlement Agreement, the percentage of juvenile anadromous fish of each of the species designated to be transported that are available for collection and that are not collected by the downstream passage facility, and enter the turbines;

(c) Turbine Survival (“TS”), the percentage of juvenile anadromous fish of each of the species to be transported that are entrained in turbines and that survive through turbines; provided that such monitoring must only be performed if and when fish passing through Project turbines may contribute materially to ODS; provided further that prior to performing Turbine Survival studies, Licensee must assume Turbine Survival equals zero;

(d) UPS at the Swift Upstream Facility;

(e) ATE at the Swift Upstream Facility;

(f) The number by species of adult fish being collected at the Swift Upstream Facility; and

(g) Hydraulic performance at the Swift Upstream Facility, such as attraction flows in cfs and water velocities in feet per second, to verify that the facility is operating according to its approved design.

#### **Article 10. Prescription for Adult Migration/Spawning Assessment**

As contemplated by the Settlement Agreement, the Licensee must identify’ the spawning timing, distribution, and spawning abundance for Transported Anadromous Species passed upstream by monitoring a statistically valid sample of each stock. The primary purpose is to identify preferred spawning areas to inform revisions to the Hatchery and Supplementation Plan and the Upstream Transport Plan, and to inform the decisions of the ACC in determining how to expend funds from the Aquatics Fund, but such identification must not otherwise create or increase obligations of the Licensee except as expressly set forth in the Settlement Agreement.

#### **Article 11. Prescription for Adjustment in Monitoring Frequency**

As contemplated by the Settlement Agreement, once any fish passage standard has been achieved, future monitoring of that standard would be limited to periodic checks to determine continued compliance with the standard.

#### **Article 12. Prescription for Response to Fish Passage Monitoring Results**

To the extent not set forth specifically in Section 9.2 of the Settlement Agreement, as contemplated by the Settlement Agreement, the obligations of the Licensee and the licensees for the Merwin, (P-935), Yale (p-2071) and Swift No. 1 (P-2111) projects,

based on the results of monitoring related to fish passage facilities, are set forth in Section 4 of the Settlement Agreement.

### **Article 13. Obligation to Consult**

Notwithstanding any other provision of these Articles, and with respect to the requirements contained therein, the Licensee's obligation to convene the ACC shall be subject to Section 15.12 of the Settlement Agreement. Where Consultation is required by the Settlement Agreement, the Licensee shall not have an obligation to Consult regarding these Articles with Parties (other than the Services) which have withdrawn from the Settlement Agreement, or with any Party (other than the Services) if the Settlement Agreement is terminated, except as described in Section 15.13 of the Settlement Agreement.

### **Article 14. Dispute Resolution**

In implementing these Articles, the Licensee shall allow for the resolution of disputes, if any, among the Parties to the Settlement Agreement in accordance with the non-binding Alternative Dispute Resolution procedures set forth in the Settlement Agreement.

## **RESERVATION OF AUTHORITY**

NOAA Fisheries Service reserves its right under Section 18 of the FPA to modify these fishway prescriptions and recommended terms and conditions based upon significant new information and conclusions developed in connection with the fulfillment of other statutory consultation and review requirements, including consultation under Section 7 of the ESA, 16 USC § 1536, or Section 305(b) of the MSA, 16 USC § 1855, regarding essential fish habitat. NOAA Fisheries Service respectfully requests the Commission, upon issuance of any new license in this proceeding, retain by means of a specific reopener provision for fishway prescriptions, in accordance with Section 18 of the FPA, and other appropriate reservations of authority, sufficient discretionary involvement or control with respect to project construction, operation, maintenance, and modification under the new license, or any amendments thereto, so as to ensure full compliance with the requirements of Section 18 of the FPA and any new or modified fishway prescription issued thereunder.

In addition, NOAA Fisheries Service respectfully requests the Commission, upon issuance of any new license in this proceeding, retain by means of a specific ESA reopener provision and other appropriate reservations of authority (including authority to require license amendments or project modifications to comply with the ESA following reinitiation of ESA Section 7 consultation at the request of the NOAA Fisheries Service), sufficient discretionary involvement or control with respect to project construction,

operation, maintenance, and modification under each new license, or any amendments thereto, so as to ensure full compliance with the requirements of the ESA, with respect to the carrying out of such actions during the term of the new license.

NOAA Fisheries Service's prescriptions for fishways presumes that the Licensee's obligations under the Settlement Agreement filed with FERC on December 1, 2004, are accepted in their entirety and without material modification. In addition to the descriptions contained herein, NOAA Fisheries Service's prescriptions rely on the Settlement Agreement and its attachments, as well as other documents in the record at FERC, as the basis and rationale for the construction, operation, and maintenance of fishways. If the Licensee's obligations under the Settlement Agreement are not accepted in their entirety, and without material modification by FERC, or are materially altered by court order or other review before becoming final, NOAA Fisheries Service reserves the right to revise and refile modified prescriptions and recommended terms and conditions within 90 days of notice indicating any such material modification or alteration.



## **APPENDIX D**

### **Fishway Prescriptions filed by the Department of the Interior under Section 18 of the Federal Power Act for the Swift No. 2 Project No. 2213**

February 22, 2006

(For convenience and clarity, these prescriptions are numbered to match the numbers contained in the applicants revised draft license articles filed with the Commission on December 19, 2005)

## **2 Fish Passage Facilities Design**

To provide for the safe, timely and effective passage past the Project of upstream migrating salmonids, the Licensee, together with the licensee for Swift No. 1 (P-2111), shall develop and implement the Swift Upstream Facility in accordance with, and subject to the limitations included in, all of the relevant provisions of the Settlement Agreement.

### **2.1 Design Review**

Except as otherwise provided under Section 4.1.9 of the Settlement Agreement, the Licensee, together with the licensee for Swift No. 1 (P-2111), must design the Swift Upstream Facility to meet the performance standard targets set out in Section 4.1.4.b of the Settlement Agreement, as applicable. The Licensee, together with the licensee for Swift No. 1 (P-2111), must use the best available technology for the type of passage facility being constructed, and design the passage facility to provide flexibility for subsequent expansion or Facility Adjustments, if needed, to meet performance standards. A fish passage facility may include duplication of some components (for example, multiple entrances) and still be considered a single passage facility. The Licensee, together with the licensee for Swift No. 1 (P-2111), must coordinate with and provide 30 percent and 60 percent completed preliminary designs for review and comment to the Services and WDFW. The Licensee, together with the licensee for Swift No. 1 (P-2111), must notify the ACC when design work has begun, and provide the 30 percent and 60 percent preliminary designs to any other Party to the Settlement Agreement at the Party's request. The Licensee, together with the licensee for Swift No. 1 (P-2111), must provide the Services and WDFW 45 days to provide their comments. The Licensee, together with the licensee for Swift No. 1 (P-2111), must submit the 90 percent preliminary designs with the relevant engineering, hydraulic, and biological work to the ACC (including at least the Services) at the times set forth in the Settlement Agreement. The Licensee, together with the licensee for Swift No. 1 (P-2111), must provide the ACC (including at

least the Services) 45 days to provide its comments on the 90 percent preliminary designs and must finalize the designs in Consultation with the ACC (including at least the Services) and with the approval of the Services. The Licensee, together with the licensee for Swift No. 1 (P-2111), must consider and address in writing those written comments provided by the members of the ACC (including at least the Services) when submitting final designs to the Services for approval.

### **3 Permits and Time for Construction**

Upon approval of the Swift Upstream Facility design by the Commission, the Licensee, together with the licensee for Swift No. 1 (P-2111), must diligently and expeditiously acquire all required Permits. The time by which such passage facility must be placed in operation is set forth in the Settlement Agreement.

### **4 Performance Standards for Fish Passage**

The Licensee, together with the licensee for Swift No. 1 (P-2111), must provide for the safe, timely, and effective passage of salmonids being transported past the Project as described in the Settlement Agreement. Specific life stages described below have quantitative standards. The Licensee, together with the licensee for Swift No. 1 (P-2111), must construct and provide for the operation and maintenance of the Swift Upstream Facility that collects all life stages of salmonids that are present at the facility, and functions during all flows and during all seasons; except to the extent it is infeasible due to flood events that require spill that could not be reasonably accommodated by the passage facility.

The Licensee must employ the following definitions in carrying out and monitoring the performance standards:

- **Adult Trap Efficiency (“ATE”):** The percentage of adult Chinook, coho, steelhead, bull trout, and sea-run cutthroat that are actively migrating to a location above the trap and that are collected by the trap.
- **Injury:** Visible trauma (including, but not limited to, hemorrhaging, open wounds without fungus growth, gill damage, bruising greater than 0.5 cm in diameter, etc.), loss of equilibrium, or greater than 20 percent descaling. “Descaling” is defined as the sum of the area on one side of the fish that shows recent scale loss. This does not include areas where scales have regenerated or fungus has grown.
- **Overall Downstream Survival (“ODS”):** The percentage of juvenile anadromous fish of each of the species to be transported that enter the reservoirs from natal streams and that survive to enter the Lewis River below Merwin Dam by collection, transport, and release via the juvenile fish passage system, passage via turbines, or some

combination thereof, calculated as provided in Schedule 4.1.4 of the Settlement Agreement.

- Upstream Passage Survival (“UPS”): Percentage of adult fish of each of the species to be transported that are collected that survive the upstream trapping-and-transport process. For sea-run cutthroat and bull trout, “adult” means fish greater than 13 inches in length.

#### **4.1 Fish Passage Performance Standards for Upstream Facilities**

For each species, the Licensee, together with the licensee for Swift No. 1 (P-2111), must achieve the following overall performance standards for fish passage: UPS of greater than or equal to 99.5 percent; and ATE to be established as described in the Settlement Agreement. If the performance standards for UPS and/or ATE are not achieved within a reasonable time, the Licensee, together with the licensee for Swift No. 1 (P-2111), must make Facility Adjustments and Modifications, as described in Section 4.1.6 of the Settlement Agreement.

#### **4.2 Passage Facility Design Performance Standards for Salmonids**

The Licensee, together with the licensee for Swift No. 1 (P-2111), must design and construct the Swift Upstream Facility to achieve the UPS equal to or greater than 99.5 percent and the ATE to be established as described in the Settlement Agreement.

#### **4.3 Adult Trap Efficiency for Salmonids**

As soon as practicable, and following Consultation described by the Settlement Agreement, the Licensee, together with the licensee for Swift No. 1 (P-2111), must develop an ATE performance standard for the Swift Upstream Facility, to ensure the safe, timely, and effective passage of adult salmonids. Until such time as the standard has been developed, the Licensee must use NOAA Fisheries fish passage guidelines. [*Anadromous Salmonid Passage Facility Guidelines and Criteria*, NMFS (Jan. 31, 2004)] The Licensee, together with the licensee for Swift No. 1 (P-2111), must consider without limitation entry rate, fall back, crowding at the entrance, delay, and abandonment of the trap area. When performance standards for ATE have been developed, the Licensee, together with the licensee for Swift No. 1 (P-2111), must submit the standards to the Commission and such standards must be used to judge performance for the Swift Upstream Facility when considering Facility Adjustments or Facility Modifications.

#### **4.4 Monitoring and Evaluation of Performance Standards**

As described in the Settlement Agreement, once the Swift Upstream Facility is

constructed and placed in operation, and after each Facility Adjustment or Facility Modification, the Licensee, together with the licensee for Swift No. 1 (P-2111), must evaluate, in Consultation with the ACC (including at least the Services) and with the approval of the Services, whether performance standards are being met for each of the species designated in the Settlement Agreement, in accordance with the monitoring and evaluation plan described in Section 9 of the Settlement Agreement.

#### **4.5 Adjustments or Modifications to Passage Facilities to Achieve Performance Standards**

A “Facility Adjustment” means a physical passage facility upgrade, improvement, or addition that was part of the original design of the passage facility, or an adjustment to the fish passage facility or its operations. A “Facility Modification” means a physical alteration or addition to a physical passage facility that requires a new design. When making Facility Modifications, the Licensee, together with the licensee for Swift No. 1 (P-2111), must follow the design process set out in Article 2, in Consultation with the ACC (including at least the Services). Whenever any Facility Adjustment or Facility Modification is completed, the Licensee, together with the licensee for Swift No. 1 (P-2111), must test the operation of the Swift Upstream Facility for a reasonable time to determine the effectiveness of such adjustment or modification. At the direction of the Services and after any required Commission approvals and obtaining all required Permits, the Licensee, together with the licensee for Swift No. 1 (P-2111), must make Facility Adjustments and Facility Modifications to the Swift Upstream Facility to achieve the relevant performance standards for each of the species designated in the Settlement Agreement as soon as practicable.

For Transported Species, if UPS and/or ATE are not being met, then the Licensee, together with the licensee for Swift No. 1 (P-2111), will make Facility Adjustments or Facility Modifications to the Swift Upstream Facility as directed by the Services, consistent with the Settlement Agreement.

Except as required in a proceeding initiated with Section 15.3.2 of the Settlement Agreement, or as provided in Section 3.5.2.b of the Settlement Agreement, the Licensee shall not be required to (1) make structural or operational changes with respect to its generating facilities or canal to achieve standards, (2) replace any fish passage facility with another passage facility, or (3) install additional collection and transport facilities or alternative fish passage facilities beyond those required by the Settlement Agreement. This Article is not intended to alter specific obligations provided under this License or the Settlement Agreement, including, without limitation, operational constraints required under Settlement Agreement Section 4.9.1.

## **5 Species to be Transported**

For purposes of all fish passage provisions contained herein, the Licensee, together with the licensee for Swift No. 1 (P-2111), with respect to the Swift Upstream Facility, must only provide for the transport of spring Chinook, winter steelhead, coho, bull trout, and sea-run cutthroat. Notwithstanding the preceding sentence, the Licensee, together with the licensee for Swift No. 1 (P-2111), after Consultation with the ACC (including at least the Services), and if directed by the Services, must also provide for the transport of fall Chinook or summer steelhead that enter the Swift Upstream Facility.

## **6 Upstream Transport Before Full Adult Fish Passage**

Unless and until alternative technologies are implemented, the Licensee, together with the licensee for Swift No. 1 (P-2111), must provide for the transport by truck of all Transported Species collected at the Swift Upstream Facility. Once the Merwin Upstream Transport Facility is completed as provided in the Merwin Project (P-935) license, and for so long as trucks are used, the Licensee, together with the licensee for Swift No. 1 (P-2111), must provide for transport at the Swift Upstream Facility according to the Upstream Transport Plan described in Section 4.1.8.c of the Settlement Agreement.

## **7 Upstream Transport After Full Adult Fish Passage**

On or before the 13<sup>th</sup> anniversary of the Issuance of the last of the Licenses for Swift No. 2, Swift No. 1 (P-2111), Yale (P-2071), and Merwin (P-935), the Licensee, together with the licensee for Swift No. 1 (P-2111), must evaluate alternative adult fish transport technologies (such as fish trams, cable lifts, or other new technologies) at the Swift Upstream Facility that allow transportation of the fish with the least practicable amount of handling or other stress-inducing actions, considering the need for sorting fish. The Licensee, together with the licensee for Swift No. 1 (P-2111), must implement such technologies provided that (1) alternative technologies are determined, by engineers qualified in fish passage and designated respectively by WDFW, USFWS, NOAA Fisheries, the Licensee, and the licensee for Swift No. 1 (P-2111), to be feasible and effective in transporting fish over dam facilities; (2) the Services determine that such technologies are suitable for meeting the Services' fish passage goals and the biological benefits are expected to be equal to or greater than the benefits of trap-and-transport by truck; and (3) the costs of the selected technology (considering both initial capital cost and ongoing operational and maintenance costs) do not significantly exceed the costs of transporting fish by truck. If there is a disagreement with the engineers' determination under (1) above, the Licensee, together with the licensee for Swift No. 1 (P-2111), shall allow for the resolution of disputes in accordance with the ADR Procedures in Section 15.10 of the Settlement Agreement. The Licensee, together with the licensee for Swift

No. 1 (P-2111), must begin carrying out such technologies after acquisition of all required Permits according to the schedule set forth in the Settlement Agreement. The selection of such technologies and selection of final designs by the Licensee, together with the licensee for Swift No. 1 (P-2111), must be made with the approval of the Services after Consultation with the ACC (including at least the Services), pursuant to Section 4.1.2 of the Settlement Agreement. The costs for such alternate technologies must be considered cumulatively for the Swift No. 2 Project (P-2213), and the Swift No. 1 (P-2111), Yale (P-2071) and Merwin (P-935) Projects, so that a cost savings from alternate technology at one Project could offset a cost increase for such technology at another Project, compared to trapping and transporting by truck. If costs are determined to significantly exceed the cost of transporting fish by truck, the Parties to the Settlement Agreement may make reasonable efforts to find more cost-effective facility designs that will achieve the same or greater biological benefit compared to trap-and-transport by truck. If (i) after due comparison of the costs of initial capital and ongoing operations and maintenance through the remaining term of the License of trapping and transporting by truck versus such costs of an alternative technology for upstream passage it appears that such alternate technologies would not be implemented because of increased costs; and (ii) any Party (other than the Licensee or the licensee for the Swift No. 1 (P-2111), Yale (P-2071) or Merwin (P-935) projects): (A) identifies alternate sources of funding, (B) provides a guarantee of payment acceptable to the Licensee and the licensee for Swift No. 1 (P-2111), of the difference in capital and ongoing operations and maintenance costs over the remaining term of the License between trap-and-transport and such alternative technology, and (C) provides such funding without additional conditions unacceptable to the Licensee and the licensee for Swift No. 1 (P-2111), express or implied; then the Licensee, together with the licensee for Swift No. 1 (P-2111), shall implement such technologies after acquisition of all required Permits according to the schedule set forth in Section 4.8 of the Settlement Agreement for the Swift Upstream Facility. If alternative methods are not used at Swift Upstream Facility because they do not meet the standards of Section 4.1.8 of the Settlement Agreement, then the Licensee, together with the licensee for Swift No. 1 (P-2111), must continue to use trap and transport by truck at such facility.

## **7.1 Upstream Transport Plan**

The Licensee, together with the licensees for Swift No. 1 (P-2111), Merwin (P-935) and Yale (P-2071), must modify the Upstream Transport Plan prepared in accordance with the licenses for the Merwin (P-935) and Yale (P-2071) projects in Consultation with the ACC (including at least the Services) and with the approval of the Services, subject to Section 15.14 of the Settlement Agreement, to address transport from the Swift Upstream Facility if trucking is to be used for transport from that facility. The plan must describe the frequency and procedures to achieve safe, timely and effective passage. The Licensee, together with the licensee for Swift No. 1 (P-2111), must provide for the transport of fish at a minimum frequency of once daily, or more if necessary, to achieve safe, timely and

effective passage. The Licensee, together with the licensees for Merwin (P-935) and Yale (P-2071) and Swift No. 1 (P-2111), must submit the modified Upstream Transport Plan to the Commission before completion of the Swift Upstream Facility.

## **8 Upstream Passage Facility at the Swift Projects**

Unless otherwise directed by the Services pursuant to Section 4.1.9 of the Settlement Agreement, on or before the 17<sup>th</sup> anniversary of the Issuance of the License for the Swift No. 1 Project (P-2111) or the Swift No. 2 Project (P-2213), whichever is later, the Licensee, together with the licensee for Swift No. 1 (P-2111), must complete construction and provide for the operation of an adult trap and transport facility at the single best site above Yale Lake, based on biological and hydrological factors, to collect, sort, and transport upstream-migrating adult Transported Anadromous Species to above the Swift No. 1 Dam (P-2111) (the “Swift Upstream Facility”), except that the USFWS may direct that bull trout be transported to a different location. The specific location of the Swift Upstream Facility must be determined by the Licensee, together with the licensee for Swift No. 1 (P-2111), in Consultation with the ACC (including at least the Services) and with the approval of the Services subject to Section 15.14 of the Settlement Agreement, on or before the 12<sup>th</sup> anniversary of Issuance of the License for the Swift No. 1 Project (P-2111) or the Swift No. 2 Project (P-2213), whichever is later. The Licensee, together with the licensee for Swift No. 1 (P-2111), must provide for the operation of the Swift Upstream Facility for the remaining term of the License for the Swift No. 2 Project (P-2213) unless the Services determine, after discussion with the ACC, that operation of the Swift Upstream Facility should not continue. If the Services make such determination after the passage facility is operational, the Licensee, together with the licensee for Swift No. 1 (P-2111), shall notify the Commission of such decision. The Licensee, together with the Licensee for Swift No. 1 (P-2111), must provide 90 percent preliminary designs to the ACC (including at least the Services) on or before the 14<sup>th</sup> anniversary of the Issuance of the License for the Swift No. 1 Project (P-2111) or the Swift No. 2 Project (P-2213), whichever is later, including any engineering, hydraulic and biological information considered by the design team. Subject to Section 15.14 of the Settlement Agreement, the Licensee, together with the licensee for Swift No. 1 (P-2111), must submit final designs to the Commission upon approval by the Services, but not later than six months after providing preliminary designs to the ACC. If these facilities do not function as well to collect bull trout as the interim collection method based on effectiveness monitoring, as determined by the USFWS, Licensee, together with the licensee for Swift No. 1 (P-2111), shall continue the interim collection method established in Section 4.9 of the Settlement Agreement.

## **9 Interim Bull Trout Collect and Haul Programs**

Until the earlier of (a) operation of the Yale Upstream Facility as provided in the License

for the Yale Project (P-2071) and the Swift Upstream Facility or (b) alternative measures are implemented as provided herein, and unless otherwise directed by U. S. Fish and Wildlife Service (USFWS), the Licensee, together with the licensee for Swift No. 1 (P-2111), shall implement a bull trout collect-and-haul program below Swift No. 2 (P-2213). A description of the collect-and-haul programs to be implemented below Swift No. 2 (P-2213) tailrace is provided in Schedule 4.9.1 of the Settlement Agreement. The Licensee, together with the licensee for Swift No. 1 (P-2111), shall provide for the transport of bull trout collected at Swift No. 2 (P-2213) to above Swift No. 1 (P-2111). Upon the request of and subject to approval by the USFWS, the Licensee, together with the licensee for Swift No. 1 (P-2111), in Consultation with the ACC, shall develop criteria, based on the latest research, to determine if, when, and where alternative release locations are needed. Any such alternative locations shall be accessible by transport truck or other mutually acceptable transportation system. At the direction of the USFWS, the Licensee, together with the licensee for Swift No. 1 (P-2111), shall provide for the transport of bull trout to such alternative locations. The Licensee, together with the licensee for Swift No. 1 (P-2111), shall continue to prepare, in Consultation with the ACC and with the approval of the USFWS, an annual Bull Trout Collection and Transport Program outlining the manner of and schedule for bull trout collection and passage at Project facilities, incorporating as appropriate either (1) the collection method identified in this Article and testing of alternative interim collection methods as provided in Section 4.9.2 of the Settlement Agreement; or (2) an alternative collection method developed pursuant to Section 4.9.2 of the Settlement Agreement. The Licensee, together with the licensee for Swift No. 1 (P-2111), may propose minor modifications to the program identified in Schedule 4.9.1 of the Settlement Agreement as part of the Bull Trout Collection and Transport Program. The Licensee, together with the licensee for Swift No. 1 (P-2111), shall not implement any modifications to the Bull Trout Collection and Transport Program until the USFWS has approved those changes.

## **10 Investigation of Alternative Bull Trout Collection Methods**

The Licensee, together with the licensee for Swift No. 1 (P-2111), with respect to the Swift No. 2 bull trout collect-and-haul program, shall investigate the use of alternative interim bull trout collection methods in Consultation with the ACC (including at least the USFWS). Such methods may include, but are not limited to, fyke traps, Denil steep passes, seines, fish wheels, and other types of active and passive gear. Annual testing of alternative methods shall begin upon approval of the Bull Trout Collection and Transport Program described in Section 4.9.1 of the Settlement Agreement, and shall continue until the USFWS approves an alternate interim collection method or until operation of the Yale Upstream Facility as provided in the License for the Yale Project (P-2071) and the Swift Upstream Facility. The Licensee, together with the licensees for Swift No. 1 (P-2111) and Yale (P-2071), shall submit, annually, a draft report to the ACC (including at least the Services) evaluating alternative interim collection methods tested during the prior year. The Licensee, together with the licensee for Swift No. 1 (P-2111), and Yale



(P-2071), shall provide the ACC (including at least the Services) 90 days to comment on the draft report. The Licensee, together with the licensees for Swift No. 1 (P-2111) and Yale (P-2071), shall finalize the report, respond to the comments of the ACC (including at least the USFWS), and submit a final report to the Commission within 180 days after sending out the report for comments.

## **11 Implementation of Alternative Bull Trout Collection Methods**

If the Licensee, together with the licensee for Swift No. 1 (P-2111), with respect to Swift No. 2 (P-2213), identifies, as part of the annual reporting process, an alternative interim collection method that will more safely and effectively collect bull trout than the collection method in use at that time, and if the USFWS concurs, then the collection method shall be modified. The Licensee, together with the licensee for Swift No. 1 (P-2111), shall, with respect to the Swift No. 2 collect-and-haul program, (1) within 180 days of submission of the report to the Commission, prepare a plan to implement such method in Consultation with the ACC and with the approval of the USFWS, subject to Section 15.14 of the Settlement Agreement, and the Commission; (2) implement such alternative method as soon as practicable after obtaining USFWS approval, subject to Section 15.14 of the Settlement Agreement; and (3) continue to implement the alternative method until the USFWS approves an alternate interim collection method, or until operation of the Yale Upstream Facility as provided in the License for the Yale Project (P-2071) and the Swift Upstream Facility.

## **12 Swift Upstream Bull Trout Facilities**

If pursuant to Section 4.1.9 of the Settlement Agreement, the Licensee, together with the licensee for Swift No. 1 (P-2111), does not build the Swift Upstream Facility, and the USFWS determines on or before the 13<sup>th</sup> anniversary of the Issuance of the License for the Swift No. 1 Project (P-2111) or the Swift No. 2 Project (P-2213), whichever is later, that collect-and-haul methods established under Sections 4.9.1 or 4.9.2 of the Settlement Agreement, are not meeting bull trout performance standards provided in Section 4.1.4 of the Settlement Agreement, then on or before the 17<sup>th</sup> anniversary of the Issuance of the License for the Swift No. 1 Project (P-2111) or the Swift No. 2 Project (P-2213), whichever is later, the Licensee, together with the licensee for Swift No. 1 (P-2111), shall complete construction of and provide for the operation of an alternate upstream passage facility (Swift Upstream Bull Trout Facility).

The Swift Upstream Bull Trout Facility is not intended to be a passage facility of the same magnitude and expense as the Swift Upstream Facility described in Section 4.8 of the Settlement Agreement. The Licensee, together with the licensee for Swift No. 1 (P-2111), shall select an alternative passage facility design for the Swift Upstream Bull Trout Facility, in Consultation with the ACC (including at least the USFWS) and with approval of the USFWS, subject to Section 15.14 of the Settlement Agreement. The Licensee, together with the licensee for Swift No. 1 (P-2111), shall construct and provide

for the operation of such passage facility for the remaining term of this License. The Licensee, together with the licensee for Swift No. 1 (P-2111), shall follow the provisions of Sections 4.1.1 through 4.1.3 of the Settlement Agreement, as applicable, when developing designs for this facility.

The Licensee, together with the Licensee for Swift No. 1 (P-2111), shall monitor performance of the Swift Upstream Bull Trout Facility as provided in the Monitoring and Evaluation Plan (M&E Plan) in Section 9 of the Settlement Agreement, and make Facility Adjustments and Facility Modifications pursuant to Section 4.1.6 of the Settlement Agreement, to the Swift Upstream Bull Trout Facility.

### **13 Obligation to Consult**

Notwithstanding any other provision of these prescriptions for Fishways, and with respect to the requirements contained therein, the Licensee's obligation to convene the ACC shall be subject to Section 15.12 of the Settlement Agreement. Where Consultation is required by the Settlement Agreement, the Licensee shall not have an obligation to Consult regarding these Fishway prescriptions with Parties (other than the Services) which have withdrawn from the Settlement Agreement, or with any Party (other than the Services) if the Settlement Agreement is terminated, except as described in Section 15.13 of the Settlement Agreement.

### **14 Dispute Resolution**

In implementing these prescriptions for Fishways, the Licensee shall allow for the resolution of disputes, if any, among the Parties to the Settlement Agreement in accordance with the non-binding Alternative Dispute Resolution procedures set forth in the Settlement Agreement.

## APPENDIX E

### **Terms and Conditions included in the National Marine Fisheries Service's Biological Opinion for Relicensing of the Lewis River Hydroelectric Projects: Merwin (No. 935), Yale (No. 2071), Swift No. 1 (No. 2111), and Swift No. 2 (No. 2213)**

August 27, 2007

#### **9.3.1 Terms and Conditions**

To be exempt from the prohibitions of Section 9 of the ESA, FERC must fully comply with conservation measures described as part of the Proposed Action and the following terms and conditions that complete the reasonable and prudent measures (RPMs) described above. In order to be exempt from the take prohibitions of Section 9 of the ESA and regulations issued pursuant to Section 4(d) of the ESA, FERC must include in the licenses and PacifiCorp and Cowlitz PUD must implement the following terms and conditions, which implement the RPMs listed above. These terms and conditions are non-discretionary. NMFS may amend the provisions of this ITS consistent with its statutory and regulatory authorities.

- 1) All Settlement Agreement provisions that relate to anadromous fish (including, but not limited to, provisions related to passage, provisions that affect habitat conditions (e.g., flows) or provisions related to monitoring) for these Projects must be followed by PacifiCorp and Cowlitz PUD and enforced by FERC. This applies to those Settlement Agreement articles that relate to salmon, their habitat, and implementation of those measures including adaptive management. Some key provisions include, but are not limited to:

Settlement Agreement:

Section 3: Anadromous Fish Reintroduction Outcome Goals  
Section 4: Fish Passage Measures,  
Section 6: Flow Releases for Fish and Other Aquatic Species,  
Section 7: Aquatic Habitat Enhancement Actions,  
Section 8: Hatchery and Supplementation Program, and  
Section 9: Aquatic Monitoring and Evaluation.

- 2) In all proposed actions involving construction in or near waterways, FERC must require PacifiCorp and Cowlitz PUD to follow the construction best management practices described below to control sediment, disturbance, and other potential detrimental effects to listed salmonids.
  - a. Minimum area. Construction impacts will be confined to the minimum area necessary to complete the project.

- b. Alteration or disturbance of the streambanks and existing riparian vegetation will be minimized to the greatest extent possible.
- c. No herbicide application should occur as part of this action. Mechanical removal of undesired vegetation and root nodes is permitted.
- d. All existing vegetation within 150 ft of the edge of bank should be retained to the greatest extent possible.
- e. Timing of inwater work. Work below the bankfull elevation will be completed during the State of Washington's or the Corps' preferred inwater work period as appropriate for the project area, unless otherwise approved in writing by NMFS.
- f. Cessation of work. Construction project activities will cease under high flow conditions that may result in inundation of the project area, except for efforts to avoid or minimize resource damage. All materials, equipment, and fuel must be removed if flooding of the area is expected to occur within 24 hours.
- g. Fish screens. All water intakes used for a construction project, including pumps used to isolate an inwater work area, will have a fish screen installed, operated, and maintained according to NMFS' fish screen criteria.
- h. Fish passage. Passage must be provided for any adult or juvenile salmonid species present in the Project area during construction, unless otherwise approved in writing by NMFS, and maintained after construction for the life of the Project. Passage will be designed in accordance with NMFS' "Anadromous Salmonid Passage Facility Guidelines and Criteria" (2004) (ATTACHMENT 1). Upstream passage is required during construction if it previously existed.
- i. Construction activities associated with habitat enhancement and erosion control measures must meet or exceed best management practices and other performance standards contained in the applicable state and Federal permits.
- j. Pollution and Erosion Control Plan. Prepare, in consultation with NMFS, and carry out a Pollution and Erosion Control Plan to prevent pollution caused by survey, construction, operation, and maintenance activities. The Plan will be available for inspection upon request by FERC or NMFS.
  - i. Plan Contents. The Pollution and Erosion Control Plan will contain the pertinent elements listed below, and meet requirements of all applicable laws and regulations.

1. The name and address of the party(s) responsible for accomplishment of the Pollution and Erosion Control Plan.
  2. Practices to prevent erosion and sedimentation associated with access roads, decommissioned roads, stream crossings, drilling sites, construction sites, borrow pit operations, haul roads, equipment and material storage sites, fueling operations, and staging areas.
  3. Practices to confine, remove, and dispose of excess concrete, cement, and other mortars or bonding agents, including measures for washout facilities.
  4. A description of any regulated or hazardous products or materials that will be used for the Project, including procedures for inventory, storage, handling, and monitoring.
  5. A spill containment and control plan with notification procedures, specific cleanup and disposal instructions for different products, quick response containment and cleanup measures that will be available on the site, proposed methods for disposal of spilled materials, and employee training for spill containment.
  6. Practices to prevent construction debris from dropping into any stream or water body, and to remove any material that does drop with a minimum disturbance to the streambed and water quality.
  7. Erosion control materials (e.g., silt fence, straw bales, aggregate) in excess of those installed must be available on site for immediate use during emergency erosion control needs.
  8. Temporary erosion and sediment controls will be used on all exposed slopes during any hiatus in work exceeding 7 days.
- ii. Inspection of erosion controls. During construction, the operator must monitor instream turbidity and inspect all erosion controls daily, or as required by Washington Department of Ecology's Construction stormwater general permit, or as determined by NMFS at the time of construction.
1. If monitoring or inspection shows that the erosion controls are ineffective, mobilize work crews immediately to make repairs, install replacements, or install additional controls as necessary.
  2. Remove sediment from erosion controls once it has reached one-third of the exposed height of the control.
- k. Construction discharge water. Treat all discharge water created by construction (e.g., concrete washout, pumping for work area isolation, vehicle wash water, drilling fluids) as follows:
- i. Water quality. Design, build, and maintain facilities to collect and treat all construction discharge water using the best available technology applicable to site conditions. Provide treatment to remove debris, nutrients, sediment, petroleum hydrocarbons, metals, and other pollutants likely to be present.
  - ii. Discharge velocity. If construction discharge water is released using an

outfall or diffuser port, velocities will not exceed 4 fps, and the maximum size of any aperture will not exceed 4 fps.

- iii. Spawning areas, submerged estuarine vegetation. Do not release construction discharge water within 300 ft upstream of spawning areas or areas with submerged estuarine vegetation. Clean construction discharge may be released.
  - iv. Pollutants. Do not allow pollutants, including green concrete, contaminated water, silt, welding slag, or sandblasting abrasive to contact any wetland or the 2-year floodplain, except cement or grout when abandoning a drill boring or installing instrumentation in the boring.
- 1. During completion of habitat enhancement activities, no pollutants of any kind (sewage, waste spoils, petroleum products, etc.) should come in contact with the water body or wetlands nor their substrate below the mean high-high water elevation or 10-year flood elevation, whichever is greater.
- m. Treated wood.
  - i. Projects using treated wood that may contact flowing water or that will be placed over water where it will be exposed to mechanical abrasion or where leachate may enter flowing water will not be used, except for pilings installed following NMFS' guidelines.
  - ii. Projects that require removal of treated wood will use the following precautions:
    - 1. Treated wood debris. Use the containment necessary to prevent treated wood debris from falling into the water. If treated wood debris does fall into the water, remove it immediately.
    - 2. Disposal of treated wood debris. Dispose of all treated wood debris removed during a project, including treated wood pilings, at an upland facility approved for hazardous materials of this classification. Do not leave treated wood pilings in the water or stacked on the streambank.
- n. Preconstruction activity. Complete the following actions before significant alteration of the Project area:
  - i. Marking. Flag the boundaries of clearing limits associated with site access and construction to prevent ground disturbance of critical riparian vegetation, wetlands, and other sensitive sites beyond the flagged boundary. Construction activity or movement of equipment into existing vegetated areas must not begin until clearing limits are marked.
  - ii. Emergency erosion controls. Ensure that the following materials for emergency erosion control are on site: A supply of sediment control materials (e.g., silt fence, straw bales), and an oil-absorbing, floating boom whenever surface water is present.

- iii. Temporary erosion controls. All temporary erosion controls will be in place and appropriately installed downslope of project activity within the riparian buffer area until site rehabilitation is complete.
- o. Temporary access roads.
  - i. Steep slopes. Do not build temporary roads mid-slope or on slopes steeper than 30 percent.
  - ii. Minimizing soil disturbance and compaction. Low-impact, tracked drills will be walked to a survey site without the need for an access road. Minimize soil disturbance and compaction for other types of access whenever a new temporary road is necessary within 150 ft of a stream, water body, or wetland by clearing vegetation to ground level and placing clean gravel over geotextile fabric, unless otherwise approved in writing by NMFS.
  - iii. Temporary stream crossings.
    - 1. Do not allow equipment in the flowing water portion of the stream channel where equipment activity could release sediment downstream, except at designated stream crossings.
    - 2. Minimize the number of temporary stream crossings.
    - 3. Design new temporary stream crossings as follows:
      - a) Survey and map any potential spawning habitat within 300 ft downstream of a proposed crossing.
      - b) Do not place stream crossings at known or suspected spawning areas, or within 300 ft upstream of such areas if spawning areas may be affected.
      - c) Design the crossing to provide for foreseeable risks (e.g., flooding and associated bedload and debris) to prevent the diversion of stream flow out of the channel and down the road if the crossing fails.
      - d) Vehicles and machinery will cross riparian buffer areas and streams at right angles to the main channel wherever possible.
    - 4. Obliteration. When the project is completed, obliterate all temporary access roads, stabilize the soil, and revegetate the site. Abandon and restore temporary roads in wet or flooded areas by the end of the inwater work period.
- p. Vehicles.
  - i. Choice of equipment. When heavy equipment will be used, the equipment selected will have the least adverse effects on the environment (e.g., minimally sized, low ground pressure equipment).
  - ii. Vehicle staging. Fuel, operate, maintain, and store vehicles as follows:
    - 1. Complete vehicle staging, cleaning, maintenance, refueling, and fuel storage, except for that needed to service boats, in a vehicle staging area

- placed 150 ft or more from any stream, water body, or wetland, unless otherwise approved in writing by NMFS.
2. Inspect all vehicles operated within 150 ft of any stream, water body, or wetland daily for fluid leaks before leaving the vehicle staging area. Repair any leaks detected in the vehicle staging area before the vehicle resumes operation. Document inspections in a record that is available for review on request by FERC or NMFS.
  3. Before activities begin and as often as necessary during construction activities, steam clean all equipment that will be used below the bankfull elevation until all visible external oil, grease, mud, and other visible contaminants are removed. Any washing of equipment must be conducted in a location that will not contribute untreated wastewater to any flowing stream or drainage area.
  4. Diaper all stationary power equipment (e.g., generators, cranes, stationary drilling equipment) operated within 150 ft of any stream, waterbody, or wetland to prevent leaks, unless suitable containment is provided to prevent potential spills from entering any stream or water body.
  5. At the end of each work shift, vehicles must not be stored within or over the waterway.
- q. Site preparation. Conserve native materials for site rehabilitation.
- i. If possible, leave native materials where they are found.
  - ii. If materials are moved, damaged, or destroyed, replace them with a functional equivalent during site rehabilitation.
  - iii. Stockpile any large wood, native vegetation, weed-free topsoil, and native channel material displaced by construction for use during site rehabilitation.
- r. Isolation of inwater work area. If adult or juvenile fish are reasonably certain to be present, or if the work area is less than 300 ft upstream of spawning habitats, completely isolate the work area from the active flowing stream using inflatable bags, sandbags, sheet pilings, or similar materials, unless otherwise approved in writing by NMFS.
- s. Capture and release. Before and intermittently during pumping to isolate an inwater work area, attempt to capture and release fish from the isolated area using trapping, seining, electrofishing, or other methods as are prudent to minimize risk of injury.
- i. The entire capture and release operation will be conducted or supervised by a fishery biologist experienced with work area isolation and competent to ensure the safe handling of all ESA-listed fish.
  - ii. If electrofishing equipment is used to capture fish, comply with NMFS' electrofishing guidelines, listed below.



1. Do not electrofish near adult salmon in spawning condition or near redds containing eggs.
  2. Keep equipment in good working condition. Complete manufacturers' preseason checks, follow all provisions, and record major maintenance work in a log.
  3. Train the crew by a crew leader with at least 100 hours of electrofishing experience in the field using similar equipment. Document the crew leader's experience in a logbook. Complete training in waters that do not contain listed fish before an inexperienced crew begins any electrofishing.
  4. Measure conductivity and set voltage as follows:
 

Conductivity ( $\mu\text{S}/\text{cm}$ )	Voltage
Less than 100	900 to 1100
100 to 300	500 to 800
Greater than 300	150 to 400
  5. Use direct current (DC) at all times.
  6. Begin each session with pulse width and rate set to the minimum needed to capture fish. These settings should be gradually increased only to the point where fish are immobilized and captured. Start with pulse width of 500 $\mu\text{s}$  and do not exceed 5 milliseconds. Pulse rate should start at 30Hz and work carefully upwards. In general, pulse rate should not exceed 40 Hz, to avoid unnecessary injury to the fish.
  7. The zone of potential fish injury is 0.5 meters from the anode. Care should be taken in shallow waters, undercut banks, or where fish can be concentrated, because in such areas the fish are more likely to come into close contact with the anode.
  8. Work the monitoring area systematically, moving the anode continuously in a herringbone pattern through the water. Do not electrofish one area for an extended period.
  9. Have crew members carefully observe the condition of the sampled fish. Dark bands on the body and longer recovery times are signs of injury or handling stress. When such signs are noted, the settings for the electrofishing unit may need adjusting. End sampling if injuries occur or abnormally long recovery times persist.
  10. Whenever possible, place a block net below the area being sampled to capture stunned fish that may drift downstream.
  11. Record the electrofishing settings in a logbook along with conductivity, temperature, and other variables affecting efficiency. These notes, with observations on fish condition, will improve technique and form the basis for training new operators.
- iii. Do not use seining or electrofishing if water temperatures exceed 18°C.
  - iv. Handle ESA-listed fish with extreme care, keeping fish in water to the maximum extent possible during seining and transfer procedures, to prevent

- the added stress of out-of-water handling.
  - v. Transport fish in aerated buckets, tanks, or sanctuary nets that hold water during transfer. Release fish into a safe release site as quickly as possible, and as near as possible to capture sites.
  - vi. Do not transfer ESA-listed fish to anyone except NMFS or USFWS personnel, unless otherwise approved in writing by them.
  - vii. Obtain all other Federal, state, and local permits necessary to conduct the capture and release activity.
  - viii. Allow NMFS or the USFWS or its designated representative to accompany the capture team during the capture and release activity, and to inspect the team's capture and release records and facilities.
- t. Earthwork. Complete earthwork (including drilling, excavation, dredging, filling, and compacting) as quickly as possible.
- i. Excavation. Material removed during excavation will only be placed in locations where it cannot enter sensitive aquatic resources. Whenever topsoil is removed, it must be stored and reused on site to the greatest extent possible. If culvert inlet/outlet protecting riprap is used, it will be class 350 metric or larger, and topsoil will be placed over the rock and planted with native woody vegetation.
  - ii. Drilling and sampling. If drilling, boring, or jacking is used, the following conditions apply.
    1. Isolate drilling activities in wetted stream channels using a steel pile, sleeve, or other appropriate isolation method to prevent drilling fluids from contacting water.
    2. If it is necessary to drill through a bridge deck, use containment measures to prevent drilling debris from entering the channel.
    3. If directional drilling is used, the drill, bore, or jack hole will span the channel migration zone and any associated wetland.
    4. Sampling and directional drill recovery/recycling pits, and any associated waste or spoils, will be completely isolated from surface waters, off-channel habitats, and wetlands. All drilling fluids and waste will be recovered and recycled or disposed to prevent entry into flowing water.
    5. If a drill boring conductor breaks and drilling fluid or waste is visible in water or a wetland, all drilling activity will cease, pending written approval from NMFS to resume drilling.
  - iii. Site stabilization. Stabilize all disturbed areas, including obliteration of temporary roads, following any break in work, unless construction will resume within 4 days.
  - iv. Source of materials. Obtain boulders, rock, woody materials, and other natural construction materials used for the project outside the riparian buffer area.

- u. Implementation monitoring. For projects undertaken by or funded by PacifiCorp or Cowlitz PUD, PacifiCorp or Cowlitz PUD will include the status of a project or a description of the completed project in the annual report. This annual report will be submitted to FERC and NMFS describing the success in meeting the RPMs and associated terms and conditions of the Opinion and will include the following.
  - i. Project identification.
    - 1. Project implementor name, project name, detailed description of the project.
    - 2. Project location by 5th or 6th field HUC and by latitude and longitude as determined from the appropriate U.S. Geological Survey 7-minute quadrangle map.
    - 3. Starting and ending dates for the work completed.
  - ii. Photo documentation. Photo documentation of habitat conditions at the project site before, during, and after project completion.
    - 1. Include general views and close-ups showing details of the project and project area, including pre- and post-construction.
    - 2. Label each photo with date, time, project name, photographer's name, and documentation of the subject activity.
  - iii. Other data. Additional project-specific data, as appropriate, for individual projects.
    - 1. Work cessation. Dates work ceased because of high flows, if any.
    - 2. Fish screen. Compliance with NMFS' fish screen criteria.
    - 3. Pollution and Erosion Control Plan. A summary of pollution and erosion control inspections, including any erosion control failures, contaminant releases, and correction efforts.
    - 4. Description of site preparation.
    - 5. Isolation of inwater work area, capture, and release.
      - a) Supervisory fish biologist's name and address.
      - b) Methods of work area isolation and take minimization.
      - c) Stream conditions before, during, and within 1 week after completion of work area isolation.
      - d) Means of fish capture.
      - e) Number of fish captured by species.
      - f) Location and condition of all fish released.
      - g) Any incidence of observed injury or mortality of listed species.
    - 6. Streambank protection.
      - a) Type and amount of materials used.
      - b) Project size - one bank or two, width, and linear feet.
    - 7. Site rehabilitation. Photo or other documentation that site rehabilitation performance standards were met.

NMFS will be reviewing the detailed construction plans submitted to advise FERC regarding whether or not those plans are likely to meet the “best management practices” articulated in this incidental take statement terms and conditions, or such additional best management practices that NMFS deems appropriate.

- 3) Conditions for research for the monitoring and evaluation identified in the November 30, 2004 Lewis River Settlement Agreement. Not all of these conditions may apply to the specific actions authorized by this ITS. Nonetheless, failure to adhere to any condition that does apply may cause NMFS to revoke the ITS.

- a. All Monitoring and Evaluation plans associated with anadromous fish developed under the November 30, 2004 Lewis River Settlement Agreement must meet NMFS’ satisfaction and must be approved by NMFS. Work will be conducted by PacifiCorp, Cowlitz PUD, or those hired by the Licensee(s) to conduct the work.

To ensure that the monitoring and evaluation plan will provide a benefit to listed species, and provide useful information on the effectiveness of various aquatic measures as well as achievement of the Reintroduction Outcome Goals, PacifiCorp and Cowlitz PUD will develop plan(s) and methods to monitor aspects of the various aquatic measures, including:

- Fish passage
- Adult anadromous salmonid migration, spawning, distribution, and abundance
- Water quality
- Hatchery supplementation programs
- Resident fish species

The Licensees’ plan(s), among other items, will thoroughly describe of all methods that will be used to capture fish and how fish will be handled; details such as sampling locations and dates; and invasive procedures such as tagging, taking tissue samples, or sacrifice and will explain the purpose of each. Each plan will include estimates of the number of each species and life stage that will be handled and/or killed for that study. In addition, the plans will include methods by which they will be modified if empirical evidence indicates that negative effects on a species/life stage are greater than expected. The Licensees’ will provide NMFS with annual reports, which NMFS will use to determine whether or not to authorize the next year’s work under a multiyear plan. NMFS must approve all plans in writing before they are implemented.

- b. The evaluator must ensure that listed species are taken only at the levels, by the

means, in the areas, and for the purposes stated in the plans developed, and according to the conditions in this permit.

- c. The evaluator must not intentionally kill or cause to be killed any listed species unless the plan specifically allows intentional lethal take.
- d. The evaluator must handle listed fish with extreme care and keep them in cold water to the maximum extent possible during sampling and processing procedures. When fish are transferred or held, a healthy environment must be provided; e.g., the holding units must contain adequate amounts of well-circulated water. When using gear that captures a mix of species, the researcher must process listed fish first to minimize handling stress.
- e. The evaluator must stop handling listed juvenile fish if the water temperature exceeds 70° F at the capture site. Under these conditions, listed fish may only be visually identified and counted.
- f. If the evaluator anesthetizes listed fish to avoid injuring or killing them during handling, the fish must be allowed to recover before being released. Fish that are only counted must remain in water and not be anesthetized.
- g. The evaluator must use a sterilized needle for each individual injection when PIT-tags are inserted into listed fish.
- h. If the evaluator unintentionally captures any listed adult fish while sampling for juveniles, the adult fish must be released without further handling and such take must be reported.
- i. The evaluator must exercise care during spawning ground surveys to avoid disturbing listed adult salmonids when they are spawning. Evaluators must avoid walking in salmon streams whenever possible, especially where listed salmonids are likely to spawn. Visual observation must be used instead of intrusive sampling methods, especially when just determining fish presence.
- j. The evaluator must use the other applicable terms and conditions in this ITS including, but not limited to, term and condition 2.s.
- k. The evaluator must obtain approval from NMFS before changing sampling locations or research protocols.
- l. The evaluator must notify NMFS as soon as possible but no later than 2 days after any authorized level of take is exceeded or if such an event is likely. The evaluator must submit a written report detailing why the authorized take level

was exceeded or is likely to be exceeded.

- m. The evaluator is responsible for any biological samples collected from listed species as long as they are used for research purposes. The evaluator may not transfer biological samples to anyone not listed in the application without prior written approval from NMFS.
  - n. The person(s) actually doing the evaluation must carry a copy of this ITS and the applicable plan while conducting the authorized activities.
  - o. The evaluator must allow any NMFS employee or representative to accompany field personnel while they conduct the evaluation activities.
  - p. The evaluator must allow any NMFS employee or representative to inspect any records or facilities related to the permit activities.
  - q. The evaluator must obtain all other Federal, state, and local permits/authorizations needed for the evaluation activities.
  - r. Every year, the evaluator must submit to NMFS a post-season report in the prescribed form (ATTACHMENT 2) describing the evaluation activities, the number of listed fish taken and the location, the type of take, the number of fish intentionally killed and unintentionally killed, the take dates, and a brief summary of the monitoring results. This report may be included in the annual report identified in the SA and required by this ITS. Falsifying annual reports or permit records is a violation of this ITS.
  - s. If the evaluator violates any permit condition they will be subject to any and all penalties provided by the ESA. NMFS may revoke this permit if the authorized activities are not conducted in compliance with the permit and the requirements of the ESA or if NMFS determines that its ESA findings are no longer valid.
  - t. Listed fish mortalities and tissue samples will be returned to the capture site.
- 4) Within 2 days of observance, reports of dead or injured salmon or steelhead shall be sent to:
- Lewis Hydro Projects Staff Lead  
HydroPower Division  
National Marine Fisheries Service  
1201 NE Lloyd Blvd., Suite 1100  
Portland, Oregon 97232

Include a concise description of the causative event (if known), and a description of any resultant corrective actions taken (if any) to reduce the likelihood of future mortalities or injuries.

## APPENDIX F

### **Terms and Conditions included in the U.S. Fish and Wildlife Service's Biological Opinion for the Relicensing of the Lewis River Hydroelectric Projects: Merwin (No. 935), Yale (No. 2071), Swift No. 1 (No. 2111), and Swift No. 2 (No. 2213)**

September 15, 2006

## **TERMS AND CONDITIONS**

In order to be exempt from the prohibitions of section 9 of the ESA, the FERC or its applicant must comply with the following Terms and Conditions (T&C), which implement the Reasonable and Prudent Measures described above and outline required reporting/monitoring requirements. These Terms and Conditions are non-discretionary. Because no RPMs were identified to minimize the incidental take of spotted owls and bald eagles, there are no associated Terms and Conditions for these species.

### **Bull Trout**

**T&C 1.1:** In restoring coho to Yale Lake, select for early spawners, if feasible, so that Cougar Creek bull trout will spawn at least partly after coho, thus reducing coho redd superimposition on bull trout.

**T&C 2.1:** Conduct annual bull trout surveys in the Swift No. 2 tailrace, Bypass Reach, and Lower and Upper Constructed Channels to document presence or absence of bull trout spawning and egg survival, if appropriate, in these locations. This will occur for a minimum of 3 years following completion of the Upper Release Point and implementation of the Bypass Reach flows (as directed by the WDOE) or until it is demonstrated that bull trout spawning does not occur in these areas.

**T&C 3.1:** If bull trout occur in the required random sample of mixed downstream migrant species in the Swift Creek Reservoir and Yale Lake traps, smolt-sized bull trout should be placed immediately in the recovery tank and transported to the next reservoir downstream. Bull trout fry should be separated from larger fish and be transferred to a separate fry tank. If possible, bull trout fry should be separated from other fry and released back into Swift Creek Reservoir away from the surface collector.

**T&C 4.1:** Determine the appropriate timing windows for instream construction in the Bypass Reach based on annual patterns of flow, temperature, and adult bull trout abundance, with a view toward minimizing suspended sediment impacts on bull trout and substrate embeddedness.

**T&C 4.2:** Where feasible and appropriate for the type, magnitude and duration of the instream activity, isolate instream construction from the flow during the work



period by installing temporary dams and pumping or diverting the water around the work zone. Dewatering may require fish rescue to avoid stranding.

**T&C 5.1:** The Licensees are authorized the direct take (harass by survey, capture, handle, and release) of bull trout while conducting annual monitoring activities and surveys for the purpose of enhancing bull trout survival, as well as to take bull trout in interim and permanent bull trout passage operations in accordance with the conditions stated below. Permitted activities are restricted to the Lewis River Subbasin, from the Columbia River to North Fork Lewis River Mile 72.5 (Lower Falls), including Lake Merwin, Yale Lake, and Swift Creek Reservoir, and all Lewis River tributaries up to Lower Falls.

**T&C 5.2.** The Utilities are responsible for assuring that the individuals conducting monitoring or collect and haul operations are properly trained and educated, and complying with the following Terms and Conditions. The Utilities shall retain a current list of such people and the list should include the following:

- 1) The name of each individual;
- 2) The resume or qualifications statement of each, detailing their experience with each species and type of activity for which they will be conducting; and
- 3) The names and phone numbers of a minimum of two references.

**T&C 5.3:** All capture, handling, and observation methods shall be implemented at times that will avoid temperature stress of bull trout being surveyed, collected, monitored, rescued, or relocated.

**T&C 5.4:** All live bull trout captured shall be released as soon as possible. Any bull trout captured and showing signs of stress or injury should only be released when able to maintain itself. Nurture such individuals in a holding tank until they have recovered. If bull trout are held in a tank, a healthy environment for the stressed bull trout must be provided, and the holding time must be minimized. Water-to-water transfers, the use of shaded, dark containers, and supplemental oxygen shall all be considered in designing bull trout handling operations. Any bull trout fry must be held in a separate container from other bull trout (including juvenile bull trout), to avoid predation by larger bull trout during captivity.

**T&C 5.5:** The period of time that captured bull trout are anesthetized shall be minimized. The number of bull trout that are anesthetized at one time shall be no more than what can be processed (biosampled) within several minutes.

**T&C 5.6:** Prior to conducting activities that involve handling of bull trout, the permittee shall ensure that hands are free of sunscreen, lotion, or insect repellent.

## Reporting Requirements

In order to monitor the effectiveness of implementing the Reasonable and Prudent Measures, the FERC or its applicants will prepare a report describing their progress in implementing the Terms and Conditions and the licenses. An annual progress report should be sent to the FWS attention: Division Manager, Division of Conservation and Hydropower Planning. The report may be included in the Annual Report required under

the SA and shall include, but not be limited to, the following:

- 1) Significant research results and its importance with regards to recovery of bull trout;
- 2) Maps or descriptions of locations sampled for each species;
- 3) The results of all sampling efforts including estimates of population size;
- 4) Quantification of take, including numbers of individuals incidentally killed, including dates, locations, and circumstances of lethal take, and an estimate of the numbers of individuals otherwise harmed or harassed (e.g., displaced during snorkeling surveys);
- 5) Other pertinent observations made during sampling efforts regarding the status and ecology of the bull trout, including size of individuals and presumed life-history form;
- 6) Progress with implementing the RPMs;
- 7) Activities carried out in the Conservation Covenants;
- 8) Activities conducted under the WHMPs;
- 9) Changes to dam operations that improve or protect the species or their habitat; and
- 10) Implementation of any Conservation Recommendations.

The FERC or its Licensees are to notify the FWS within 3 working days upon locating a dead, injured, or sick endangered or threatened species specimen. They must make initial notification at the nearest FWS Law Enforcement Office. Contact the FWS Law Enforcement Office at (425) 883-8122 or the FWS Western Washington Fish and Wildlife Office at (360) 753-9440. Notification must include the date, time, precise location of the injured animal or carcass, and any other pertinent information. Care should be taken in the handling of sick or injured specimens to preserve biological materials in the best possible state for later analysis of cause of death. In conjunction with the care of sick or injured endangered or threatened species or preservation of biological materials from a dead animal, the finder has the responsibility to ensure that evidence associated with the specimen is not unnecessarily disturbed. Reports of incidental injury or killing must include the date, time, precise location of the injured animal or carcass, and any other pertinent information such as cause of death or injury. In regards to bull trout, all incidental mortalities shall be preserved in a fashion to best provide maximum scientific information (otoliths, scales, genetic samples, general fisheries statistics, etc.). Any specimen killed shall be kept whole and put on ice or frozen, and a small sample of tissue (fin clip approximately 1 square centimeter) shall be preserved in a vial of 95 percent ethanol for genetic analysis.

Document Content(s)

revised p-2213 .DOC.....1-122

Order On Rehearing

October 16, 2008

125 FERC ¶ 61,047  
UNITED STATES OF AMERICA  
FEDERAL ENERGY REGULATORY COMMISSION

Before Commissioners: Joseph T. Kelliher, Chairman;  
Sudeen G. Kelly, Marc Spitzer,  
Philip D. Moeller, and Jon Wellinghoff.

Public Utility District No. 1 of Cowlitz County,  
Washington

Project No. 2213-024

ORDER ON REHEARING

(Issued October 16, 2008)

1. Public Utility District No. 1 of Cowlitz County, Washington (Cowlitz), filed a request for rehearing of the June 26, 2008 Commission staff order issuing a new license for the continued operation and maintenance of the 66.8-megawatt (MW) Swift No. 2 Project No. 2213, located on the North Fork Lewis River in Cowlitz and Skamania Counties, Washington.<sup>1</sup> Cowlitz seeks modification or clarification of the project's water quality certification, license Articles 401, 402, and 405, and spending caps. On July 25, 2008, the National Marine Fisheries Service (NMFS) filed a request for clarification and correction of the order issuing license. For the reasons discussed below, we clarify the license order and grant rehearing in part.

**Background**

2. The Swift No. 2 Project operates with flows released into the canal from PacifiCorp's Swift No. 1 powerhouse and includes a 3-mile-long canal, powerhouse, tailrace, and substation. The project occupies 3.27 acres of Forest Service land<sup>2</sup> administered by the U.S. Department of Agriculture's Forest Service (Forest Service).

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<sup>1</sup> 123 FERC ¶ 62,259 (2008).

<sup>2</sup> On May 14, 2008, Cowlitz filed a revised Exhibit G, which showed the acres of Forest Service land to be 3.27, not 3.79 as stated in the license order.

3. Cowlitz's license is one of four licenses issued on June 26, 2008, to Cowlitz and PacifiCorp for four projects located on the North Fork Lewis River.<sup>3</sup> The licenses incorporate almost all of the provisions of a comprehensive Settlement Agreement (Agreement) related to the relicensing of the four projects.<sup>4</sup> The provisions of the Agreement that are common to all four projects are discussed in the Order on Offer of Settlement and Issuing New License for the Swift No. 1 Project (Master Order).<sup>5</sup>

## **Discussion**

### **A. Water Quality Certification**

4. Appendix B to the license order attaches, and makes a condition of the license, the water quality certification for the project issued by Washington Department of Ecology (Ecology) on October 9, 2006, and amended December 21, 2007, and January 17, 2008. Cowlitz explains that, on November 3, 2006, Ecology issued another amendment, which is not reflected in the certification attached to the license. We will revise the certification to include the November 2006 amendment, which modifies certification condition 4.3.5., relating to total dissolved gas limitations. In addition, as pointed out by Cowlitz, we will revise an informational exhibit included in the certification (and in Appendix B to the license order) to delete a section (6.1.5) that is not included in the certification as issued by Ecology.<sup>6</sup>

### **B. License Article 401**

5. Article 401(a) requires that the licensee submit for Commission approval various plans required by the conditions contained in the several appendices to the license,<sup>7</sup> but

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<sup>3</sup> See 123 FERC ¶¶ 62,257 through 62,260 (2008).

<sup>4</sup> The Agreement was filed on December 3, 2004.

<sup>5</sup> 123 FERC ¶ 62,260 (2008).

<sup>6</sup> We also amend Appendix B to correct the issuance date of the certification.

<sup>7</sup> See Appendix A – Forest Service conditions under section 4(e) of the Federal Power Act (FPA), Appendix C – Department of Commerce fishway prescription under FPA section 18, Appendix D – Department of Interior fishway prescription, and Appendix E – National Marine Fisheries Service Biological Opinion.

which do not provide for Commission approval. It also establishes deadlines for submitting the required plans to the Commission.

6. Article 401(a)(1) requires that Cowlitz file an upstream fish transport plan within 18 months of license issuance. Cowlitz asks that we change the deadline to be consistent with other conditions of the license, which do not require the upstream transport plan until year 17 of the license, and then only if certain conditions are met. We will grant the request and revise Article 401(a)(1).

7. Article 401(a)(2) requires Cowlitz to file an annual bull trout collection and transport plan within six months of license issuance (i.e., by December 28, 2008) and annually thereafter. Cowlitz asserts that there is not enough time between the end of the monitoring and transport season and late December to prepare the plan and requests that the due date for the plan be annually from date of license issuance, beginning June 2009. This request is reasonable, and we will modify the requirement.

8. As noted by the licensee, the license does not require Cowlitz to prepare the habitat preparation plan referenced in Article 401(a)(3), so we will correct the table by deleting the reference.

9. Article 401(a)(4) requires Cowlitz to file for Commission approval an aquatics fund strategic plan and annual plans proposing measures to be implemented under the aquatics plan before those measures can be implemented. Cowlitz argues that filing these plans is unduly burdensome and asks the Commission to eliminate the requirement for prior Commission approval. To ensure that the license requirements are properly carried out, we need to be able to review and approve the proposed measures prior to their implementation.<sup>8</sup> Therefore, we deny Cowlitz's request.

10. Article 401(b) requires Cowlitz to file applications to amend its license prior to implementing "unspecified long-term changes to project operations, requirements, or facilities for the purpose of protecting and enhancing environmental resources." Cowlitz and NMFS assert that this is unnecessary because the Agreement resolves all issues

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<sup>8</sup> The Commission cannot delegate management of license requirements to another party or parties. As the agency charged with the administration of hydropower licenses, the Commission must approve licensees' post-licensing plans. That authority cannot be ceded to other entities. Approval of plans or operational changes outside of the parameters approved in the license by other entities, but not the Commission, is not acceptable. *See Settlements in Hydropower Licensing Proceedings under Part I of the Federal Power Act*, 116 FERC ¶ 61,270 (2006).

regarding the relicensing of the project, and that the parties to the Agreement do not contemplate any measures that are not already included in the Agreement and the conditions of the license.<sup>9</sup> We agree that if the measures are contemplated in the Agreement and incorporated in the license, then minor changes or adjustments to those requirements would not require an application to amend the license. However, in the event that the licensee wishes to implement unspecified, long-term, material changes to project operations, requirements, or facilities (i.e., not contemplated in the Agreement and not evaluated by staff prior to issuing the license order), then an amendment would be required. If the licensee is uncertain of whether an action requires an amendment, it should consult with Commission staff prior to undertaking the action.

11. Article 401(b)(1) requires that Cowlitz file an application to amend the license for any “adjustments” to the upstream fish passage facility required by the license. Cowlitz states that this will place an unnecessary burden on it to seek an amendment for any change to the facility, however minor. We clarify that this is not meant to require an amendment for minor changes to the facility, but rather to those material changes that were not contemplated by the license.

12. As noted by the licensee, the license does not require Cowlitz to implement any downstream fish passage measures or construct any stress release ponds, so we will correct Article 401(b) by deleting the references to downstream passage in (3) and (4) and the reference to stress release ponds in (5). In addition, we will correct Article 401(b)(6) to cite to section 18 condition 8 (instead of condition 11) and Article 401(b)(8) to cite to section 18 condition 12 (instead of condition 15); and delete Article 401(b)(9), which is a requirement of PacifiCorp’s Swift No. 1 Project No. 2111, and Article 401(b)(10), with which the licensee has already complied.

### **C. Article 402**

13. Article 402 requires that Cowlitz (1) net bull trout from the project’s tailrace and haul them to a location determined by FWS, and (2) partially fund the operation of the Speelyai Hatchery. Cowlitz contends that Article 402 should be deleted as unnecessary. These two measures are already covered by other conditions of the license, respectively, the bull trout collection and transport plan required by NMFS’s Biological Opinion

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<sup>9</sup> In its filing, NMFS states that, if we do not make the requested clarification, its filing should be considered as a request for rehearing. While we are granting the requested clarification, we note that, as a request for rehearing, the filing would be deficient and subject to dismissal because it lacks the statement of issues section required by section 385.713 of our regulations, 18 C.F.R. § 385.713(c)(2) (2008).



(condition 1, which incorporates section 4.9 of the Agreement) and the hatchery and supplementation program that is also required by the Biological Opinion (condition 1, which incorporates section 8 of the Agreement). We agree that those requirements of the article should be deleted, but that Article 402 is necessary for requiring evaluation of bull trout annually and for managing the Devil's Backbone Conservation Covenant to benefit bull trout. Accordingly, we will revise Article 402.

#### **D. Article 405**

14. Article 405 requires that Cowlitz construct a barrier-free bank fishing facility at the Swift No. 2 canal bridge. Cowlitz constructed such a facility in 2005, so we will revise the article to instead require the licensee to operate and maintain the facility.

#### **E. Cost Caps**

15. The Master Order recognizes that the Agreement and many of the conditions of the four licenses establish limits on the licensee's responsibility to fund various resource mitigation measures and studies, but concludes that it is nevertheless the licensees' obligation to complete the measures required by the license articles, in the absence of Commission authorization to the contrary.<sup>10</sup>

16. On rehearing, Cowlitz objects to this conclusion, and asks instead that the Commission approve the cost limits included in the Agreement.<sup>11</sup>

17. We deny the request. We understand the licensee's desire to fix the costs that it may incur for resource protection and enhancement measures. As the order explains, it is likely that the specified funding will be sufficient for the measures in question. However, the Commission cannot constrain the fulfillment of its statutory responsibilities by agreeing to such spending caps.<sup>12</sup> We therefore affirm the conclusion in the Master Order that it is the licensee's obligation to complete the measures required by the license articles, in the absence of Commission authorization to the contrary. In addition, we are adding license Article 411 to so state.

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<sup>10</sup> 123 FERC ¶ 62,260 at P 21.

<sup>11</sup> Cowlitz states that it adopts PacifiCorp's argument on this issue, which PacifiCorp raises in its request for rehearing.

<sup>12</sup> See, e.g., *Public Utility District No. 1 of Chelan County, Washington*, 119 FERC ¶ 61,055, at P 12-17 (2007).

**F. Corrections to Discussion Section of License Order**

18. Cowlitz also seeks correction of some typographical errors and other items in the discussion section of the order. The requested corrections and edits are minor and do not affect the license articles or ordering paragraphs. Except as discussed below, we take note of them, but see no need to take any action.

19. Cowlitz contends that the order's description of the precise location of the federal lands within the project boundary is not accurate, and that the federal lands within the project boundary are not lands of the Gifford Pinchot National Forest. While the approved Exhibit G maps do not indicate whether or not the lands in question are located specifically within the Gifford Pinchot National Forest, these maps clearly indicate that these lands are federal lands. In any case, the location of lands and facilities in the approved Exhibit G maps would take precedence over any statement in the body of the license order. As to the nature of the federal lands within the project boundary, Cowlitz provides no information to support its contention. In addition, Cowlitz takes issue with the statement in the license order (P 88) that the amount of proposed new investment of environmental measures at Cowlitz's project is relatively modest (thus warranting a license term of less than 50 years). Cowlitz insists that the Agreement requires a significant investment in environmental measures, a finding that would result in a 50-year license term. While we agree with the Director that the license requires only a moderate investment, any distinction here is meaningless inasmuch as Cowlitz's license is for a 50-year term in order to coordinate its license expiration date with the other three Lewis River licenses.

**The Commission orders:**

(A) The request for rehearing and clarification filed on July 25, 2008, by the Public Utility District No. 1 of Cowlitz County, Washington, is granted to the extent discussed in this order and in Ordering Paragraphs (C) through (H) below, and is denied in all other respects.

(B) The request for clarification filed on July 25, 2008, by National Marine Fisheries Service is granted to the extent set forth in this order.

(C) The table in Article 401(a) is revised to read:

	Forest Service section 4(e) condition	Commerce/ Interior section 18 condition	NMFS BO condition (Settlement Agreement section)	Plan name	Due date
1		7.1	1 (4.8)	Upstream transport plan	Seventeen years after license issuance or prior to the completion of the Swift Upstream Facility if trucking is used
2		9	1 (4.9)	Bull trout collection and transport program	Within 1 year of license issuance and annually, thereafter
3					
4	9		1 (7.5.3.2)	Aquatics fund strategic plan	Within 1 year of license issuance; report annually thereafter
5			1 (8.2)	Hatchery and supplementation plan	Within 1 year of license issuance; updates every 5 years thereafter
6			1 (8.2.3)	Hatchery and supplementation operating plan	Annually, after approval of the hatchery and supplementation plan
7			1 (9.1)	Monitoring and evaluation plan	Within 2 years of license issuance

(D) The table in Article 401(b) is revised to read:

	Condition no.	Modification
1	Section 18 no. 4.5 and BO no.1	Modifications to passage facilities to achieve performance standards
2	Section 18 no. 7 and BO no. 1	Implementation of alternative fish transport technologies, should they be deemed

		necessary
3-5		
6	Section 18 no. 8 and BO no. 1	Construction of upstream fish passage facility
7	Section 18 no. 11 and BO no. 1	Modification to bull trout collection methods
8	Section 18 no. 12 and BO no. 1	Construction, operation, or modification of an upstream bull trout facility
9-10		

(E) Article 402 is revised to read:

Article 402. *Aquatic Resources Management Measures.* The licensee shall continue to implement the following aquatic resources management measure:

(a) evaluate bull trout annually; and

(b) manage the Devil's Backbone Conservation Covenant to benefit bull trout (section 5.2 of the Settlement Agreement filed on December 3, 2004).

The licensee shall include evidence of compliance with these measures in the annual reports filed with the Commission under section 14.2.6 of the Settlement Agreement.

(F) Article 405 is revised to read:

Article 405. *Barrier-free Canal Bank Fishing Facility.* The licensee shall operate and maintain the barrier-free bank fishing facility at the canal bridge that was constructed under section 11.3.1 of the Settlement Agreement.

(G) Appendix B of the order issuing license is revised to delete Section 6.1.5 from Exhibit A to the appendix, to correct the date of issuance of the water quality certification to October 9, 2006, and to replace the requirements of condition 4.3.5 with those set forth in the November 6, 2006 amendment to the water quality certification, which is attached to this order.

(H) The following Article 411 is added:

Article 411. Funding. Notwithstanding the limitation on expenditures as expressed in the mandatory conditions and included in this license, the Commission reserves the right to require the licensee to undertake such measures as may be appropriate and reasonable to implement approved plans and other requirements in this license.

By the Commission.

( S E A L )

Kimberly D. Bose,  
Secretary.

State of Washington, Department of Ecology  
Water Quality Certification  
November 3, 2006  
Swift No. 2 Project No. 2213

First Amendment Order No. 3927, amending Order No. 3676

Condition 4.3.5 of the Certification is deleted and replaced with the following requirements:

4.3.5 The licensee shall manage water releases through the surge arresting structure to limit TDG production to 110% or less saturation.

- a) Within six (6) months of this Certification-Order Amendment, the Licensee shall submit a total dissolved gas (TDG) sampling plan for Ecology's review and approval. The purpose of this plan is to determine TDG production in the release water of the Surge Arresting Structure (SAS).
- b) During the testing of the operation of the SAS and by no later than one year after issuance of this Certification-Order Amendment, the Licensee shall sample water releases from the SAS to verify that the water released complies with the 110% TDG criterion. The Licensee shall submit sampling results to Ecology in the Annual Water Quality Monitoring Report as required by Condition 4.8.6 of the Certification.
- c) Sampling results shall be submitted to Ecology in the annual water quality monitoring report.
- d) Within six (6) months after the discovery of an exceedance of the 110% TDG criterion caused by water releases from the SAS, the Licensee shall submit a TDG Water Quality Attainment Plan (TDG WQAP) to Ecology for review and approval. The TDG WQAP shall include:
  - i. A description of operations with regard to minimizing TDG production resulting from water releases from the SAS;
  - ii. A description of how the operations will reduce TDG production from the Project to comply with the water quality criterion within 10 years;
  - iii. An evaluation of all reasonably available and preferred structural and operational improvements to reduce TDG production from the SAS to comply with the water quality criterion;
  - iv. A timeline showing when operational adjustments will occur;
  - v. A schedule for construction; and
  - vi. Sampling plans to further evaluate TDG production from the SAS and to test effectiveness of the structural and operational adjustments implemented pursuant to the TDG WQAP.

- e) The Project shall operate according to the approved TDG WQAP, with the objective of eliminating exceedances of the 110% TDG criterion.
- f) Upon approval of the TDG WQAP, the Licensee shall immediately begin the necessary steps identified in the TDG WQAP to eliminate TDG criterion exceedances.
- g) Sampling required in condition 4.3.5 (d) (vi) may reveal that TDG water quality criterion is not achieved within 10 years of discovery of a TDG water quality exceedance. If so, Ecology will require further activities to meet water quality criterion. Significant structural or operational revisions that may impose potentially unreasonable costs or create potentially unreasonable societal effects may be evaluated as part of a formal Use Attainability Analysis consistent with the federal and state water quality regulations after the 10 year compliance period has ended.