

**EXHIBIT NO. \_\_\_(PKW-3)  
DOCKET NO. UE-13\_\_\_\_  
2013 PSE PCORC  
WITNESS: PAUL K. WETHERBEE**

**BEFORE THE  
WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION**

**WASHINGTON UTILITIES AND  
TRANSPORTATION COMMISSION,**

**Complainant,**

**v.**

**PUGET SOUND ENERGY, INC.,**

**Respondent.**

**Docket No. UE-13\_\_\_\_**

**SECOND EXHIBIT (NONCONFIDENTIAL) TO THE  
PREFILED DIRECT TESTIMONY OF  
PAUL K. WETHERBEE  
ON BEHALF OF PUGET SOUND ENERGY, INC.**

**APRIL 25, 2013**

127 FERC ¶ 62,174  
UNITED STATES OF AMERICA  
FEDERAL ENERGY REGULATORY COMMISSION

Puget Sound Energy, Inc.

Project No. 2493-084

ORDER AMENDING LICENSE

June 1, 2009

1. On December 6, 2007, and supplemented on January 14, 2008, February 1, 2008, February 25, 2008, June 2, 2008, August 22, 2008, and January 27, 2009, Puget Sound Energy, Inc. (Puget), licensee for the Snoqualmie Falls Hydroelectric Project No. 2493, filed an application to amend its license. The licensee proposes to construct different project facilities from those authorized in the 2004 license. As discussed below, this order grants the amendment request.

**Background**

2. On June 29, 2004, the Commission issued a new license for the Snoqualmie Falls Project, located on the Snoqualmie River in the City of Snoqualmie, King County, Washington.<sup>1</sup>

3. As authorized in the 2004 license order, Plant 1 works would include: (1) a concrete intake structure with trashracks, gates, and hoists on the south bank of the river about 300 feet upstream from the dam; (2) one 8-foot-diameter and one 6-foot-diameter steel penstock in 270-foot-long vertical rock shafts; (3) a 200-foot-long, 40-foot-wide, 30-foot-high underground powerhouse containing one horizontal Francis turbine rated at 15,300 horsepower (hp) directly connected to a synchronous generator rated at 11,500 kilowatts (kW) and one Turgo Impulse turbine rated at 6,875 hp directly connected to a synchronous generator rated at 4,500 kW for a total capacity of 16,000 kW; (4) a 450-foot-long tailrace tunnel, which returns the flow to Snoqualmie Falls plunge pool; and (5) a 0.06-mile-long, 115-kilovolt (kV), three-phase transmission line; and (6) appurtenant facilities.

4. The project works at Plant 2 authorized in the 2004 license would include: (1) a concrete intake structure on the north bank about 50 feet upstream from the dam, with trashracks, gates and hoists; (2) a 12-foot-diameter, 1,215-foot-long concrete-lined

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<sup>1</sup> 113 FERC ¶ 62,186, Order Issuing New License, issued June 29, 2004.

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tunnel; (3) a 100-foot-long, 30-foot-deep, 25-foot-wide open forebay with a gatehouse and three 8-foot headgates; (4) a 7-foot-diameter, 600-foot-long steel penstock leading to Unit 1 and two 7-foot-diameter, 75-foot-long steel penstocks that join to form a 10-foot-diameter, 515-foot-long bifurcated steel penstock leading to Unit 2; (5) a 46-foot-wide by 122-foot-long above-ground concrete powerhouse containing a horizontal Francis turbine rated at 15,300 hp connected to a horizontal shaft generator rated at 11,400 kW and a vertical, Francis turbine rated at 33,800 hp connected to a vertical shaft generator rated 27,000 kW, for a total capacity of 38,400 kW; (6) each penstock has a bifurcation with a bypass pipeline to divert water into a 120-foot-long, 20-foot-wide, 31-foot-deep concrete bypass chamber; (7) a 0.5-mile-long, 115-kV, three-phase transmission line; and (8) appurtenant facilities.

### **Proposed Amendment**

5. The licensee proposed the following modifications to the project dam and Plant 1 and Plant 2 features as discussed below.

#### **A. Diversion Dam**

6. Instead of installing the inflatable rubber weir diversion dam authorized in the license, Puget proposes to construct a fixed crest dam at a reduced height at the site of the current dam. The reduced-height, fixed-crest dam would be 2 feet lower than the present dam and would extend approximately 35 feet further than the current dam to native rock on the left bank, without a side-channel spillway.

#### **B. Channel Alignment**

7. The licensee proposes to excavate the left bank to create a new channel alignment, widening the river by approximately 20 to 25 feet and raising the height of the bank by approximately 6.5 feet to provide greater flood protection and a better approach for flows entering Plant 1. Excavation would include the removal of the existing deteriorated timber crib wall, as well as the rubble infill, to straighten the alignment of the river through this area. Removal of the wall and excavation of the left bank to the new channel alignment would remove an existing flow constriction, thereby helping to achieve relief from upstream flooding.

#### **C. Plants 1 and 2**

8. The licensee proposes to remove the machine shop and transformer house. The buildings are in a deteriorated state (notwithstanding regular maintenance) due to damage

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associated with local flood events and the Nisqually Earthquake,<sup>2</sup> and are currently considered by the licensee to be unsafe for continued commercial use or occupancy. The buildings also pose an access restriction for construction equipment necessary to rebuild the dam and Plant 1. Two other buildings, the carpenter shop and the west garage, also present access restrictions. These two buildings would be temporarily or permanently relocated.

9. Instead of retiring the five generating units at Plant 1 and replacing them with two new generating units as authorized in the license, Puget proposes to preserve the four existing Pelton units and to replace only the single existing Francis unit. The proposed modification would decrease the installed capacity of the Plant 1 powerhouse from 16.0 megawatts (MW) to 13.7 MW. The hydraulic capacity of the Plant 1 powerhouse would increase from 875 cubic feet per second (cfs) to 900 cfs.

10. The licensee proposes to remove and rebuild the gatehouse and powerhouse at Plant 2 in order to address seismic deficiencies and to perform improvements otherwise required by the project license. Included in the proposed modification of the powerhouse would be the reconfiguration of the Unit 6 turbine generating unit.<sup>3</sup> The proposed reconfiguration of Unit 6 would increase the installed capacity of the Plant 2 powerhouse from 38.4 MW to 40.7 MW. The hydraulic capacity of the Plant 2 powerhouse would remain unchanged at 1,800 cfs.

11. The following table shows the proposed installed capacities and hydraulic capacities at the Plant 1 and 2 powerhouses as compared to the capacities authorized in the new license issued on June 29, 2004.

	<b>Authorized Installed Capacity (MW)</b>	<b>Proposed Installed Capacity (MW)</b>	<b>Authorized Hydraulic Capacity (cfs)</b>	<b>Proposed Hydraulic Capacity (cfs)</b>
<b>Plant 1</b>				
Unit 1	11.5	1.8	600	150
Unit 2	4.5	1.8	275	150
Unit 3	N/A	1.8	N/A	150

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<sup>2</sup> On February 28, 2001, an earthquake with a magnitude of 6.8 known as the Nisqually Earthquake occurred in Washington.

<sup>3</sup> In its December 6, 2007 application for license amendment and supplemental filings, the licensee refers to the two turbine generating units located in the Plant 2 powerhouse as Unit 6 and Unit 7. In the June 29, 2004 Order Issuing New License, the two units are referenced as Plant 2 Unit 1 and Unit 2. For clarification, this order refers to the two units in the Plant 2 powerhouse as Unit 6 and Unit 7.

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Unit 4	N/A	1.8	N/A	150
Unit 5	N/A	6.5	N/A	300
Plant 1 Total	16.0	13.7	875	900
<b>Plant 2</b>				
Unit 6	11.4	13.7	575	575
Unit 7	27.0	27.0	1,225	1,225
Plant 2 Total	38.4	40.7	1,800	1,800
<b>Total</b>	54.4	54.4	2,675	2,700

12. Operation of the project would not change and the proposed modifications to the turbine generating units at Plants 1 and 2 would not change the total installed capacity of the project.<sup>4</sup> The total hydraulic capacity of the project would increase from 2,675 cfs to 2,700 cfs.

#### **D. Soil Remediation**

13. Puget proposes a soil remediation plan to address the presence of contaminated soils in the vicinity of Plant 1. As discussed in the February 2009 Environmental Assessment (EA), Puget would remove and properly dispose of contaminated soils pursuant to a remediation plan filed with the Commission on June 2, 2008, while performing excavation work in the Plant 1 area. The soil remediation work would be undertaken in coordination with the Washington State Department of Ecology (Ecology), in accordance with the Washington State Model Toxics Control Act.

#### **Public Notice**

14. On February 25, 2008, the Commission issued a public notice that the amendment application was accepted for filing, the project was ready for environmental analysis, and soliciting comments, recommendations, terms and conditions, and prescriptions. In response, timely motions to intervene were filed by Ecology, Washington Department of Fish and Wildlife (WDFW), the Snoqualmie Tribe, and American Whitewater. Timely comments were filed by the U.S. Department of the Interior, Office of the Secretary (Interior). Puget filed reply comments.

15. On September 2, 2008, the Commission issued a public notice seeking comments on the amendment application's proposal for the remediation of contaminated soils at the project. Ecology and the Snoqualmie Tribe filed timely motions to intervene, restating

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<sup>4</sup> Although the licensee's proposed modifications result in a decrease in installed capacity of the Plant 1 powerhouse and an increase in installed capacity of the Plant 2 powerhouse, the combined effect is that the total authorized installed capacity of the project would remain unchanged at 54.4 MW.

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their interests in the proceeding. Timely comments were filed by Interior. Puget filed reply comments.

16. On February 27, 2009, the Commission issued an EA to evaluate the potential environmental effects of the proposal and identify environmental measures to mitigate or reduce potential impacts. Comments providing minor clarifications on the EA were received from Puget and the U.S. Geological Survey.

### **Water Quality Certification**

17. Under section 401(a)(1) of the Clean Water Act (CWA),<sup>5</sup> an applicant for a federal license or permit to conduct an activity that may result in a discharge into waters of the United States must provide the licensing or permitting agency with water quality certification (WQC) that the discharge would not violate water quality standards from the applicable state. The federal agency may not authorize the activity unless certification has been obtained or the state has waived certification through failure to act on the request for certification within one year after receipt of that request.

18. Ecology stated in its March 7 and September 22, 2008 filings that it has determined that the application would not require an amendment to the WQC issued for the license.<sup>6</sup>

### **Coastal Zone Management Act**

19. Under section 307(c)(3)(A) of the Coastal Zone Management Act (CZMA),<sup>7</sup> the Commission may not issue a license for a project within or affecting a state's coastal zone unless the state CZMA agency concurs with the license applicant's certification that the project is consistent with the state's CZMA program, or the agency's concurrence is conclusively presumed by its failure to act within 180 days of receipt of the applicant's certification. Ecology manages the approved Coastal Zone Management Program for Washington State.

20. Ecology reviewed the amendment and found that the current project as described in the amendment application is still consistent with the CZMA.<sup>8</sup>

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<sup>5</sup> 33 U.S.C. § 1341(a)(1) (2006).

<sup>6</sup> The section 401 certification, issued on September 24, 2003, was filed with the Commission on October 6, 2003, and incorporated into the new license.

<sup>7</sup> 16 U.S.C. § 1456(3)(A) (2006).

<sup>8</sup> Email from Geoff Talent, Section Manager, Shorelands and Environmental

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### **Threatened and Endangered Species**

21. Section 7(a)(2) of the Endangered Species Act of 1973 (ESA)<sup>9</sup> requires federal agencies to ensure that their actions are not likely to jeopardize the continued existence of endangered or threatened species, or result in the destruction or adverse modification of the critical habitat.

22. Listed species that may be found in the project area include the threatened marbled murrelet, the threatened northern spotted owl, the threatened Puget Sound Chinook salmon, the threatened Coastal Puget Sound bull trout and the threatened Puget Sound steelhead. Review of the proposed amendment does not indicate that any federally listed species would be jeopardized as a result of the proposed action. No habitat for listed species would be affected by project construction because these activities would take place on or immediately adjacent to already disturbed sites.

23. The effects of construction activities and project operation on listed species were reviewed during the recent licensing of the project. We have determined that the construction activities related to the proposed action are similar in nature to those already examined for relicensing of the project. In a Biological Assessment sent to the U.S. Fish and Wildlife Service (FWS) and National Marine Fisheries Service (NOAA Fisheries) on November 2, 2001, Commission staff concluded that licensing the project with staff-recommended measures “is not likely to adversely affect” the federally listed threatened bull trout, bald eagle, northern spotted owl, or marbled murrelet, or the federally listed threatened Puget Sound Chinook salmon and its critical habitat. The FWS and NOAA Fisheries concurred with Commission staff by letters filed on January 15, 2002, and February 12, 2003, respectively. The license includes conditions recommended by staff in the Biological Assessment to protect listed species. These conditions will remain in effect under the proposed action.

24. On March 29, 2007, Puget met with representatives of NOAA Fisheries, FWS, and WDFW. Conditions that had changed subsequent to issuance of the license include the endangered-species status of the peregrine falcon (delisted) and the recent federal listing of Puget Sound steelhead. As stated in the licensee’s consultation record, during the meeting the agencies confirmed that the project modifications being proposed would not adversely affect aquatic and terrestrial resources, and that all measures required by the license to address those resources were sufficient and unaffected by these modifications.

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Assistance, Northwest Regional Office, Department of Ecology filed on January 15, 2009.

<sup>9</sup> 16 U.S.C. § 1536(a) (2006).

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25. Given the measures in place from the Biological Assessment, and based on the licensee's consultation with the agencies, we conclude that the proposed amendment will not affect threatened or endangered species.

### **National Historic Preservation Act**

26. Under section 106 of the National Historic Preservation Act (NHPA),<sup>10</sup> and its implementing regulations,<sup>11</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 any undertaking. This generally requires the Commission to consult with the State Historic Preservation Officer, and any Indian tribes that attach religious and cultural significance to historic properties potentially affected by the proposed action, to determine whether and how the action may affect historic properties and seek ways to avoid or minimize any adverse effects.

27. In a letter to representatives of the Snoqualmie Tribe, Yakama Indian Nation, and Tulalip Tribes (Tribes), dated February 27, 2008, the Commission provided information on Puget's application for amendment of license, requested comments on the proposed action, and expressed its willingness to meet with the Tribes to discuss their interests and concerns in the affected area. By letter to the Commission, dated March 27, 2008, the tribal administrator for the Snoqualmie Tribe indicated the tribe would like to meet with the Commission to discuss its concerns. No other responses to the Commission's February 27, 2008 letter were received. On August 22, 2008, Commission staff met with representatives of the Snoqualmie Tribe, at the tribe's offices, to discuss participation in the process.

28. To satisfy its section 106 responsibilities, the Commission, on December 23, 2008, executed a memorandum of agreement (MOA) with the Washington State Department of Archaeology and Historic Preservation (DAHP), and invited Puget and the following entities to concur with the stipulations of the MOA: the Tulalip Tribes; Snoqualmie Indian Tribe; Yakama Nation; King County, Washington; Museum of History and Industry; City of Snoqualmie; Northwest Railway Museum; and Snoqualmie Valley Historical Museum. The City of Snoqualmie and the Snoqualmie Valley Historical Museum concurred. The other entities did not respond to the invitation to concur with the MOA. The Advisory Council on Historic Preservation was invited to participate in the consultation, but declined.

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<sup>10</sup> 16 U.S.C. § 470 (2006) *et seq.*

<sup>11</sup> 36 C.F.R. Part 800 (2008).



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29. The MOA requires the licensee to carry out the measures stipulated in the agreement, as elements of the historical resources mitigation and management plan (HRMMP) for the project.<sup>12</sup> Execution of the MOA demonstrates the Commission's compliance with section 106 of the NHPA. Ordering paragraph (K) requires the licensee to implement the MOA.

### **Section 18 Fishway Prescriptions**

30. Section 18 of the Federal Power Act (FPA)<sup>13</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. No fishway prescriptions or reservations of authority were filed under section 18 of the FPA for this proceeding.

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

31. Section 10(j) of the FPA<sup>14</sup> requires the Commission to include license conditions based on recommendations by federal and state fish and wildlife agencies submitted pursuant to the Fish and Wildlife Coordination Act,<sup>15</sup> to "adequately and equitably protect, mitigate damages to, and enhance, fish and wildlife (including related spawning grounds and habitat)" affected by the project. No 10(j) recommendations were submitted for this amendment proceeding.

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

32. Section 10(a)(1) of the FPA<sup>16</sup> requires that any project for which the Commission issues a license shall be best adapted to a comprehensive plan for improving or developing a waterway or waterways for the use or benefit of interstate or foreign commerce; for the improvement and utilization of waterpower development; for the

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<sup>12</sup> The HRMMP, dated February 26, 1996, was accepted upon execution of the Programmatic Agreement (PA) referenced in article 419 of the project license. The PA was executed on January 17, 1997, among the Commission, DAHP, and Advisory Council on Historic Preservation. Article 419 requires the licensee to implement the PA and HRMMP.

<sup>13</sup> 16 U.S.C. § 811 (2006).

<sup>14</sup> 16 U.S.C. § 803(j)(1) (2006).

<sup>15</sup> 16 U.S.C. §§ 661 (2006) *et seq.*

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

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. No 10(a)(1) recommendations were submitted for this amendment application.

## **Other Issues**

### **A. Tribal Concerns**

33. The Snoqualmie Tribe, in its comments filed January 8, 2008, states that the project amendment proposal constitutes a substantial burden on the tribal members' ability to exercise their religion in violation of the Religious Freedom and Restoration Act.<sup>17</sup> It disagrees with the licensee's characterization of the amendment restoring to the area a more natural appearance.

34. The Religious Freedom and Restoration Act provides that the government "shall not substantially burden a person's exercise of religion even if the burden results from a rule of general applicability "unless the government "demonstrates that application of the burden to the person (1) is in furtherance of a compelling governmental interest; and (2) is the least restrictive means of furthering that compelling governmental interest."<sup>18</sup>

35. The Ninth Circuit, relying on *Navaho Nation v. U.S. Forest Service*,<sup>19</sup> found that the new license issued for the Snoqualmie Falls Project does not impose a substantial burden under the Religious Freedom and Restoration Act on the tribal members' ability to exercise their religion.<sup>20</sup> Similarly, the proposed amendment will not.

### **B. Sediment and Erosion Control Plan**

36. Puget states that addenda to the sediment and erosion control plan (SECP) for the project would be prepared when construction activities are sufficiently designed, scoped, and scheduled, and would be filed with the Commission, for approval. Under the SECP, Puget would implement erosion control measures and best management practices for excavation sites, construction laydown areas, spoil storage areas, existing and new access roads, and all areas where construction activities occur near surface or groundwater. Puget indicates that the addenda would reflect the project modifications proposed in the

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<sup>17</sup> 42 U.S.C. § 2000bb (2006).

<sup>18</sup> 42 U.S.C. § 2000bb-1(a)-(b) (2006).

<sup>19</sup> 535 F.3d 1058 (9<sup>th</sup> Cir. 2007).

<sup>20</sup> 545 F.3d 1207 (9<sup>th</sup> Cir. 2008).

amendment application, including the procedures and measures Puget would implement under its soil remediation plan, and the City of Snoqualmie's Shoreline Substantial Development Permit for this work, which are included in its June 2, 2008 filing. Puget also indicates that the addenda would be prepared in consultation with the FWS, NOAA Fisheries, WDFW, Ecology, Washington State Department of Transportation (WDOT), City of Snoqualmie, King County, and Snoqualmie Tribe.

37. Ordering paragraph (B) of the November 3, 2006 order approving the SECP requires the licensee to "prepare addenda specifying the site-specific sediment and erosion control plan to be implemented for approval, when the construction of authorized project features are scoped and scheduled."<sup>21</sup> Also, under this ordering paragraph, the licensee is to prepare the addenda in consultation with the National Park Service, NOAA Fisheries, WDFW, Ecology, City of Snoqualmie, King County, and Snoqualmie Tribe. Ordering paragraph (F) of this order revises ordering paragraph (B) of the November 3, 2006 order to: (1) specify that the addenda are to address the project modifications described in the amendment application; (2) add the FWS and WDOT to the agencies to be consulted in preparing the addenda; (3) clarify that the licensee is to file the addenda with the Commission, for approval; and (4) require the addenda to be filed with the Commission at least 30 days before the start of any land-clearing or ground-disturbing activities at the project.

### **C. Construction Wastes Transportation and Disposal Plan**

38. Puget is required to implement the construction waste transportation and disposal plan (CWTDP) for the project, which the Commission approved on March 22, 2007.<sup>22</sup> Puget states that the CWTDP, which was prepared in consultation with the FWS, NOAA Fisheries, WDFW, Ecology, WDOT, City of Snoqualmie, King County, and Snoqualmie Tribe, would also be updated through addenda when construction activities are sufficiently designed, scoped, and scheduled. As with the SECP, Puget indicates that the addenda would be prepared in consultation with the above entities, and would incorporate procedures and measures from Puget's soil remediation plan, and the City of Snoqualmie's Shoreline Substantial Development Permit for this work, as applicable. Ordering paragraph (G) requires the Puget to file the addenda with the Commission, for approval, along with documentation of consultation, at least 30 days before the start of construction activities.

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<sup>21</sup> 117 FERC ¶ 62,122, Order Modifying and Approving Sediment and Erosion Control Plan Under License Article 403, issued November 3, 2006.

<sup>22</sup> 118 FERC ¶ 62,215, Order Approving Construction Waste Transportation and Disposal Plan Pursuant to Article 404, issued March 22, 2007.

**D. Amphibian Habitat Monitoring Report and Enhancement Plan**

39. Puget proposes to monitor wetland habitat changes at Kimball Creek and Sandy Cove Park before and after project construction. If vegetation changes are significant and determined to be detrimental to breeding amphibians, as determined in consultation with the WDFW, Puget proposes to design an enhancement plan to create or enhance breeding habitat for amphibians in suitable areas, depending upon the new water levels. Ordering paragraph (H) requires Puget to monitor wetland habitat changes and to develop an amphibian habitat enhancement plan, in consultation with the FWS and WDFW, if vegetation changes are significant and determined to be detrimental to breeding amphibians.

**E. Peregrine Falcon Management Plan**

40. Puget proposes to monitor, prior to construction activities, peregrine falcon nesting sites observed in the vicinity of Snoqualmie Falls. The monitoring would be conducted using a process similar to the process approved in the licensee's terrestrial resource management plan for the monitoring of osprey nests.<sup>23</sup> If nesting activity is observed, Puget proposes to consult with the WDFW to determine potential effects of project related construction on nesting peregrine falcons. Ordering paragraph (I) requires Puget to monitor peregrine falcon nesting sites during construction activities between May 15 and June 30, using the process for monitoring of osprey nests as stated in the approved terrestrial resource management plan, and to consult with the FWS and WDFW if nesting activity is observed.

**F. Exterior Color of Rebuilt Plant 2 Powerhouse**

41. As noted in the EA, the proposed modifications to Plant 2 would be consistent with Puget's approved aesthetic resources plan (ARP) for the project.<sup>24</sup> Specifically, the exterior of the rebuilt gatehouse, and replaced and refurbished penstocks would be an unobtrusive dark gray or green color compatible with the natural landscape. However, because the Plant 2 powerhouse was not proposed to be rebuilt at the time the new license was issued, the ARP did not include a proposed exterior color for the

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<sup>23</sup> On June 29, 2005, the licensee filed a terrestrial resource management plan pursuant to Article 416 of the project license. On November 29, 2005, the Commission issued an Order Modifying and Approving Terrestrial Resource Management Plan Pursuant to Article 416 (113 FERC ¶ 62,157).

<sup>24</sup> Order Approving Aesthetic Resources Plan Under Article 420, 115 FERC ¶62,244 (2006).

powerhouse. Ordering paragraph (J) requires Puget to select colors for the exterior of this rebuilt facility that are uniform in appearance with the gatehouse and penstocks.

### **Comprehensive Plans**

42. Section 10(a)(2)(A) of the FPA<sup>25</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>26</sup> Under section 10(a)(2)(A), federal and state agencies filed 72 comprehensive plans that address various resources in Washington State. For this proceeding, the staff identified and reviewed 13 of these comprehensive plans that are relevant to the Snoqualmie Falls Project.<sup>27</sup> No conflicts were found.

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<sup>25</sup> 16 U.S.C. § 803(a)(2)(A) (2006).

<sup>26</sup> Comprehensive plans for this purpose are defined at 18 C.F.R. §2.19 (2008).

<sup>27</sup> The plans are: (1) The Fifth Northwest Electric Power and Conservation Plan, Northwest Power and Conservation Council, 2005; (2) Strategies for Washington's Wildlife, Washington State Department of Game, 1987; (3) Snohomish River Basin Instream Resources Protection Program, Washington State Department of Ecology, 1979; (4) Hydroelectric Project Assessment Guidelines, Washington State Department of Fisheries, 1987; (5) An Assessment of Outdoor Recreation in Washington State: A State Comprehensive Outdoor Recreation Planning (SCORP) Document 2002-2007, Interagency Committee for Outdoor Recreation, 2002; (6) Washington State Scenic River Assessment, Washington State Parks and Recreation Commission, 1988; (7) State of Washington Outdoor Recreation and Habitat: Assessment and Policy Plan 1995-2001, Interagency Committee for Outdoor Recreation, 1995; (8) Washington State Trails Plan: Policy and Action Document, Interagency Committee for Outdoor Recreation, 1991; (9) Resource Protection Planning Process -- Southern Puget Sound Study Unit, Washington State Department of Community Development, 1987; (10) Fisheries USA: The Recreational Fisheries Policy of the U.S. Fish and Wildlife Service, U.S. Fish and Wildlife Service, undated; (11) The Nationwide Rivers Inventory, National Park Service, 1982; (12) Washington State Hydropower Development/Resource Protection Plan, Washington State Energy Office, 1992; and (13) North American Waterfowl Management Plan, U.S. Fish and Wildlife Service and Canadian Wildlife Service, 1986.

## **Applicant's Plans and Capabilities**

### **A. Conservation Efforts**

43. Section 10(a)(2)(C) of the FPA requires the Commission to consider the electricity consumption improvement program of the applicant, including its plans, performance, and capabilities for encouraging or assisting its customers to conserve electricity cost-effectively, taking into account the published policies, restrictions, and requirements of state regulatory authorities.

44. Puget has provided conservation services for its electricity customers since 1979. Puget offers various energy conservation programs, incentives, and tools to residential customers as well as commercial and industrial customers. Included in the services offered are the following: cash rebates; home improvement suggestions; grants to fund energy-efficiency projects; installation and maintenance programs; and an online energy audit tool. These programs show that Puget is making an effort to conserve electricity and has made a satisfactory good faith effort to comply with section 10(a)(2)(C) of the FPA.

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

45. Commission staff has reviewed Puget's operation, maintenance, and management of the Snoqualmie Falls Project pursuant to the requirements of 18 C.F.R. Part 12 of the Commission's regulations and the Commission's Engineering Guidelines. The Snoqualmie Falls Project has a low hazard potential classification and is not subject to Part 12, Subpart D of the Commission's regulations. Additionally, in accordance with section 12.21(a) of the Commission's regulations,<sup>28</sup> Puget has been granted an exemption from filing an Emergency Action Plan (EAP).<sup>29</sup> Staff concludes that the dam and other project works are safe, and that there is no reason to believe that Puget cannot continue to safely manage, operate, and maintain these facilities under an amended license.

## **Comprehensive Development**

46. Sections 4(e) and 10(a)(1) of the FPA<sup>30</sup> require the Commission to give equal consideration to power development purposes and to the purposes of energy

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<sup>28</sup>18 C.F.R. § 12.21(a) (2008).

<sup>29</sup> By letter dated July 30, 2008, the Division of Dam Safety and Inspections Portland Regional Engineer granted Puget's request for a continuation of the exemption from preparing an EAP.

<sup>30</sup> 16 U.S.C. §§ 797(e) and 803(a)(1) (2006).

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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 issue this license amendment, and the terms and conditions included herein, reflect such consideration.

47. The EA for the licensee's proposal contains background information, analysis of impacts, and support for related license articles. Staff concludes, based on the record of this proceeding, including the EA and comments thereon, that issuing an amendment to the license as described in this order would not constitute a major federal action significantly affecting the quality of the human environment.

48. Based on staff's independent review and evaluation of the project, recommendations from the resource agencies and other stakeholders, and the no-action alternative, as documented in the EA, staff has selected the licensee's proposal, with the staff-recommended measures, and finds that it is best adapted to a comprehensive plan for improving or developing the Snoqualmie River.

49. This alternative is selected because: (1) issuance of the amendment will serve to maintain a beneficial, dependable, and inexpensive source of electric energy; (2) the required environmental measures will protect fish and wildlife resources, water quality, recreational resources, and historic properties; and (3) the 54.4 MW of electric energy generated from this renewable resource may offset the use of fossil-fueled generating plants, thereby conserving nonrenewable resources and reducing atmospheric pollution.

### **Administrative Conditions**

#### **A. Exhibit Drawings**

50. Included in the December 6, 2007 filing of the amendment application is a set of Exhibit F drawings. Supplements containing revised Exhibit F drawings were filed on January 14, 2008, February 1, 2008, and January 27, 2009. The Exhibit F drawings conform to the Commission's rules and regulations and are approved by ordering paragraph (D). Ordering paragraph (E) requires the licensee to file the approved drawings in aperture card and electronic file formats.

#### **B. Construction-Related Articles**

51. The obligations set forth under the 300 series license articles that require the licensee to consult with the Commission's Division of Dam Safety and Inspections (D2SI) – Portland Regional Engineer are applicable to this amendment. The licensee may not begin construction until the D2SI – Portland Regional Engineer has reviewed

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and commented on the plans and specifications, determined that all preconstruction requirements have been satisfied, and authorized start of construction.

### **Conclusion**

52. It is concluded that the modifications to the two powerhouses and the diversion dam, as well as the removal of contaminated soils in the vicinity of Plant 1, with the mitigation and monitoring measures required by this order would not constitute a major federal action significantly affecting the quality of the human environment. Therefore, the amendment application will be granted, as considered herein.

#### **The Director orders:**

(A) The license for the Snoqualmie Falls Hydroelectric Project No. 2493 is amended as provided by this order, effective the day this order is issued.

(B) The application to amend the license, filed December 6, 2007, and supplemented on January 14, 2008, February 1, 2008, February 25, 2008, June 2, 2008, August 22, 2008, and January 27, 2009, is modified and approved as provided in this order.

(C) Ordering paragraph (B)(2) of the license is revised to read as follows:

Project works consisting of: (1) an approximately 260-foot-long fixed crest dam, located on the Snoqualmie River, with a crest elevation of 394.5 feet mean sea level (msl); and (2) two generating plants.

Plant 1 works consisting of: (1) a concrete intake structure with trashracks, gates, and hoists on the south bank of the river about 350 feet upstream from the dam; (2) a 9-foot-diameter steel penstock in a 270-foot-long vertical rock shaft; (3) a 200-foot-long, 40-foot-wide, 30-foot-high underground powerhouse containing four Pelton turbine generating units (Units 1 - 4) rated at 1,800 kilowatts (kW) each and one horizontal Francis turbine generating unit (Unit 5) rated at 6,500 kW for a total capacity of 13,700 kW; (4) a 450-foot-long tailrace tunnel, which returns the flow to Snoqualmie Falls plunge pool; and (5) a 0.15-mile-long, 13.8-kV, three-phase underground transmission line; and (6) other appurtenances.

Plant 2 works consisting of: (1) a concrete intake structure on the north bank about 50 feet upstream from the dam, with trashracks, gates and hoists; (2) a 12-foot-diameter, 1,215-foot-long concrete-lined tunnel; (3) a 100-foot-long, 30-foot-deep, 25-foot-wide open forebay with a gatehouse and three 8-foot headgates; (4) a 7-foot-diameter, 600-foot-long steel penstock leading to Unit 6 and two 7-foot-diameter, 75-foot-long steel penstocks that join to form a 10-foot-diameter, 515-foot-long



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bifurcated steel penstock leading to Unit 7; (5) a 46-foot-wide by 190-foot-long above-ground concrete powerhouse containing a vertical Francis turbine generating unit rated at 13,700 kW and a vertical Francis turbine generating unit rated at 27,000 kW for a total capacity of 40,700 kW; (6) each penstock has a bifurcation with a bypass pipeline contained in the powerhouse structure; (7) a 0.5-mile-long, 115-kV, three-phase transmission line; and (8) other appurtenances.

(D) The following filed Exhibit F drawings conform to the Commission's rules and regulations, and are approved and made part of the license.

<b>Exhibit No.</b>	<b>FERC Drawing No.</b>	<b>Drawing Title</b>	<b>Date Filed</b>	<b>Superseded FERC Drawing No.</b>
F-2	2493-1018	General Site Plan	January 27, 2009	2493-1002
F-3	2493-1019	Hydraulic Profile	February 1, 2008	2493-1003
F-4	2493-1020	Diversion Dam Plan and Sections	December 6, 2007	2493-1004 2493-1005 2493-1006
F-6-1	2493-1021	Plant 1 New Intake - New Wall and Area Plan	December 6, 2007	2493-1007
F-6-2	2493-1022	Plant 1 New Intake - New Wall and Intake Sections	January 27, 2009	--
F-6-3	2493-1023	Plant 1 New Intake - Vertical Section	December 6, 2007	--
F-6-4	2493-1024	Plant 1 New Intake - Intake Horizontal Sections	December 6, 2007	--
F-7	2493-1025	Plant 1 Powerhouse - Plan and Sections	December 6, 2007	--
F-9	2493-1026	Plant 2 New Intake - Plan and Sections	December 6, 2007	2493-1008
F-12	2493-1027	Plant 2 Unit 6 Penstock Profile	January 27, 2009	2493-1009
F-19-1	2493-1028	Plant 2 Powerhouse Site Plan	January 27, 2009	2493-1011
F-19-2	2493-1029	Plant 2 Powerhouse Unit 6 Substructure Concrete Plans	January 27, 2009	--
F-19-3	2493-1030	Plant 2 Powerhouse Unit 6 Substructure Concrete Sections	January 27, 2009	--
F-21	2493-1031	Plant 2 Powerhouse - Powerhouse Building Elevations	January 27, 2009	2493-1012
F-23-1	2493-1032	Plant 2 Forebay - Plan and Sections	December 6, 2007	--
F-23-2	2493-1033	Plant 2 Forebay - Gatehouse Vertical Section	December 6, 2007	--
F-23-3	2493-1034	Plant 2 Forebay - Gatehouse Horizontal Section	December 6, 2007	--

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(E) Within 45 days of the date of issuance of this order, the licensee shall file the approved exhibit drawings in aperture card and electronic file formats.

a) Three 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- 2493-1018) 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-2), Drawing Title, and date of this order shall be typed on the upper left corner of each aperture card. See Figure 1.

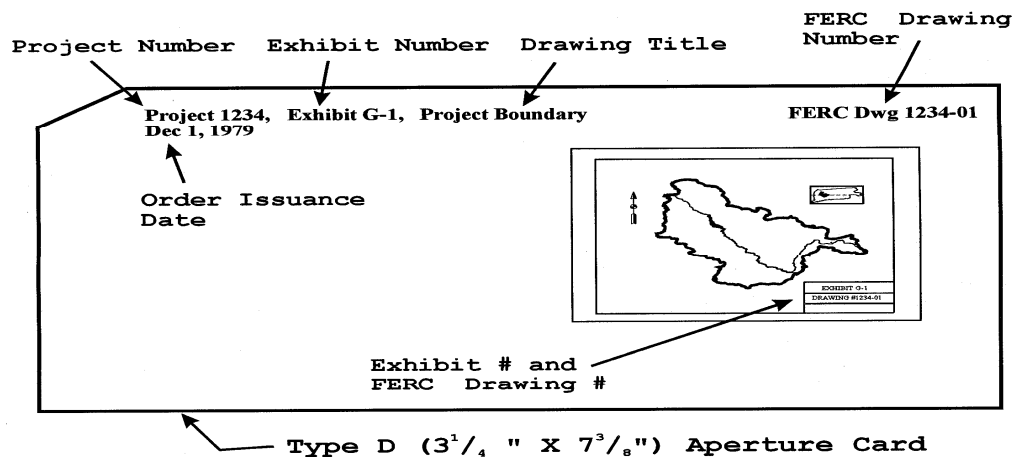


Figure 1.

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

b) The licensee shall file two separate sets of exhibit drawings in electronic raster format with the Secretary of the Commission, ATTN: OEP/DHAC. A third set shall be filed with the Commission's Division of Dam Safety and Inspections Portland Regional Office. Exhibit F drawings must be 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 order, and file extension in the following format [P-2493-1018, F-2, General Site Plan, MM-DD-YYYY.TIF]. Electronic drawings shall meet the following format specification:

IMAGERY - black & white raster file

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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

(F) Addenda to Sediment and Erosion Control Plan. Ordering paragraph (B) of the Order Modifying and Approving Sediment and Erosion Control Plan Under License Article 403, issued November 3, 2006, is revised to: (1) specify that the plan addenda are to address the project modifications described in the application to amend the license approved in ordering paragraph (B), above, including the procedures and measures the licensee is to implement under its soil remediation plan, and the City of Snoqualmie’s shoreline substantial development permit for this work; (2) add the U.S Fish and Wildlife Service and Washington State Department of Transportation to the agencies to be consulted in preparing the addenda; (3) clarify that the licensee is to file the addenda with the Commission, for approval; and (4) require the addenda to be filed with the Commission at least 30 days before the start of any land-clearing or ground-disturbing activities at the project. Also, ordering paragraph (B) of the November 3, 2006 order is revised to: (1) reserve to the Commission the right to require changes to the addenda; (2) require the licensee to not begin any land-clearing or ground-disturbing activities until the addenda are approved by the Commission; and (3) require the licensee, upon Commission approval, to implement the control measures described in the addenda, including any changes required by the Commission.

(G) Addenda to Construction Waste Transportation and Disposal Plan. The licensee, at least 30 days before the start of any project construction activities, shall file with the Commission, for approval, addenda to the construction waste transportation and disposal plan approved in the Commission’s March 22, 2007 order. The addenda shall address the project modifications described in the application to amend the license, approved in ordering paragraph (B) above, including the procedures and measures the licensee is to implement under its soil remediation plan, and the City of Snoqualmie’s shoreline substantial development permit for this work, as applicable.

The licensee shall prepare the addenda in consultation with the U.S. Fish and Wildlife Service, National Oceanic and Atmospheric Administration, Washington Department of Fish and Wildlife, Washington Department of Ecology, Washington Department of Transportation, City of Snoqualmie, King County, and Snoqualmie Tribe. The licensee shall include with the addenda documentation of consultation with these entities, copies of the entities’ comments and recommendations on the addenda after it has been prepared and provided to the entities, and specific descriptions of how the entities’ comments are accommodated by the addenda. The licensee shall allow a minimum of 30 days for the entities to comment before filing the addenda with the Commission. If the licensee does not adopt a recommendation, the filing shall include the licensee’s reasons, based on project-specific information.

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The Commission reserves the right to require changes to the addenda. The licensee shall not begin any project construction activities until the addenda are approved by the Commission. Upon Commission approval, the licensee shall implement the procedures and measures described in the addenda, including any changes required by the Commission.

(H) *Amphibian Habitat Monitoring Report and Enhancement Plan.* The licensee shall monitor wetland habitat changes at Kimball Creek and Sandy Cove Park before and after the project is constructed. Monitoring shall employ the use of established photo points and/or transects or plots. Within one year after completion of project construction, the licensee shall file, with the Commission, an amphibian monitoring report that includes a description of any habitat changes at Kimball Creek and Sandy Cove Park as a result of project construction and water level changes, and the impact of those changes on breeding amphibian habitat. The report shall include documentation of consultation with the Washington Department of Fish and Wildlife and the U.S. Fish and Wildlife Service.

If vegetation changes are significant and determined to be detrimental to breeding amphibians, as determined in consultation with Washington Department of Fish and Wildlife, and the U.S. Fish and Wildlife Service, then the licensee shall develop an amphibian habitat enhancement plan to create or enhance breeding habitat for amphibians in suitable areas, depending upon the new water levels. The plan shall be filed, for Commission approval, with the amphibian habitat report, and shall include documentation of consultation with the Washington Department of Fish and Wildlife and the U.S. Fish and Wildlife Service.

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

(I) *Peregrine Falcon Management Plan.* The licensee shall, during construction activities, conduct monitoring of peregrine falcon nesting sites between May 15 and June 30. The monitoring shall be conducted following the process used for monitoring of osprey nests, as stated in the licensee's approved Terrestrial Resource Management Plan pursuant to Article 416. If nesting activity is observed, the licensee shall consult with the Washington Department of Fish and Wildlife and the U.S. Fish and Wildlife Service to determine potential effects of project related construction on nesting peregrine falcons, and what actions to take to avoid or minimize those effects. A final report shall be filed with the Commission, the Washington Department of Fish and Wildlife and the U.S. Fish and Wildlife Service documenting the presence or absence of nesting activities, what actions were taken during construction to protect nests, and

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documentation of any agency consultation that took place. This report shall be included in the annual report required pursuant to the license's approved Terrestrial Resource Management Plan.

(J) Exterior Color of Rebuilt Plant 2 Powerhouse. The licensee shall select colors for the exterior of the rebuilt Plant 2 powerhouse that are uniform in appearance with the exterior colors of the rebuilt Plant 2 gatehouse and the replaced and refurbished Plant 2 penstocks, consistent with the aesthetic resources plan for the project approved in the Commission's June 1, 2006 order.

(K) Implementation of Memorandum of Agreement. The licensee shall implement the "Memorandum of Agreement Between the Federal Energy Regulatory Commission and the Washington State Department of Archaeology and Historic Preservation Regarding the Proposed Modifications to the Snoqualmie Falls Hydroelectric Project (FERC No. 2493), King County, Washington," executed on December 23, 2008, including but not limited to the stipulations to be carried out as elements of the Historical Resources Mitigation and Management Plan (HRMMP), dated February 26, 1996, and accepted upon execution of the Programmatic Agreement specified in Article 419 of the project license, which the licensee is required to implement, along with the HRMMP, under that article.

In the event that the above Memorandum of Agreement is terminated, the licensee shall still implement the above-referenced stipulations under the HRMMP.

(L) This order constitutes final agency action. Requests for rehearing may be filed within 30 days of the date of issuance of this order, pursuant to 18 C.F.R. § 385.713.

J. Mark Robinson  
Director  
Office of Energy Projects