

5.0 STAFF'S CONCLUSIONS

5.1 COMPREHENSIVE DEVELOPMENT AND RECOMMENDED ALTERNATIVE

Sections 4(e) and 10(a)(1) of the FPA require the Commission to give equal consideration to all uses of the waterway on which a project is located. When we review a proposed project, we equally consider the environmental, recreational, fish and wildlife, and other non-developmental values of the project, as well as power and developmental values. Accordingly, any license issued shall be best adapted to a comprehensive plan for improving or developing a waterway or waterways for all beneficial public uses.

This section contains the basis for and a summary of our recommendations to the Commission for relicensing the Baker River Project. We weigh the costs and benefits of our recommended alternative against other proposed measures.

Based on our independent review and evaluation of the proposed project and the No Action Alternative, we select the proposed action as modified by staff, as the preferred alternative. We recommend this option because: (1) issuance of a new hydropower license by the Commission would allow Puget to operate the project as an economically beneficial and dependable source of electrical energy for its customers; (2) the 200.03-MW project would eliminate the need for an equivalent amount of fossil-fueled derived energy and capacity, which helps conserve these nonrenewable resources and limits atmospheric pollution; (3) the public benefits of this alternative would exceed those of the No Action Alternative; and (4) the recommended measures would protect and enhance fish, wildlife, and cultural resources and would improve recreation opportunities at the project.

Puget's Settlement Agreement contains 50 proposed license articles with various protection, mitigation, and enhancement measures that Puget requests be included in any new license issued for the project. Below, we list those measures in the Settlement Agreement that we recommend including in any license (section 5.1.1). We also discuss those additional measures outside the Settlement Agreement that we recommend (section 5.1.2); our rationale for any substantial modifications (section 5.1.3); and those measures in the Settlement Agreement that we do not recommend (section 5.1.4). In our analysis, we focus on the actual protection, mitigation, and enhancement measures contained in each proposed license article. Finally, many of Puget's proposed articles include provisions for providing funds to the Forest Service or to other entities for implementing proposed environmental measures. While a licensee may hire a third party to perform a requirement of a license, the Commission can only look to a licensee to ensure that the requirement is met. Therefore, we do not recommend that any license require Puget to provide funding to third parties to implement individual measures; instead, we recommend Puget implement the measures.

5.1.1 Proposed Measures Recommended by Staff⁴⁶

We recommend including the following measures contained in the Settlement Agreement in any license issued for the project. The measures we recommend incorporate both minor and substantive changes to the proposed license articles contained in the Settlement Agreement. Substantive changes to the proposed measures are discussed in section 5.1.3.

Fish Propagation (Proposed Article 101)

- Develop a Fish Propagation Facilities Plan that includes provisions for the following: (1) constructing ancillary facilities and/or modifying the project's Sockeye Spawning Beach 4 to improve functionality and productivity by: (i) isolating the water supply to each of the existing segments, (ii) installing concrete walls between segments, (iii) improving alarm systems, and (iv) controlling sediment at the Sulphur Springs water supply intake site, including if necessary, capping the intake area to prevent sliding material from moving into the water supply;
(2) constructing additional fish culture facilities at the project's Sulphur Springs site to provide a total of 20,000 pounds of instantaneous cultured fish capacity (exclusive of eggs and anadromous adults) and 7,000 pounds of egg incubation capacity (including egg incubation capacity that may be provided at Spawning Beach 4), including some or all of the following structures, facilities, and equipment necessary for adult holding, spawning, and egg incubation: (i) water chiller(s), (ii) fry starter(s), (iii) troughs or ponds, (iv) rearing ponds, and (v) loading facilities;
(3) determining: (i) the capacity of Baker Lake and Lake Shannon for the production of sockeye smolts and fry, (ii) production limits of sockeye fry from monitoring and analyses of returning broodstock and subsequent smolt production, and (iii) the limits of Sockeye Spawning Beach 4 with a goal of optimizing operations to produce about 4 million fry;
(4) operating facilities as recommended by the Sauk-Suiattle Indian Tribe, Swinomish Indian Tribal Community, Upper Skagit Tribe, and WDFW (Fish Co-managers) according to: (i) the above-stated fishery management objectives, (ii) weight, production targets, species mix, life stages and quantities up to the capacity and production limits in items (2) and (3), and (iii)

⁴⁶ In many instances Puget proposes funding for measures, whereas staff recommends the measures themselves. We also note that the responsibility for approving measures called for under a Commission license lies with the Commission.

production within the limits of the space available at the project's Sulphur Springs site;

(5) decommissioning the project's Sockeye Spawning Beaches 1, 2, and 3 by: (i) retaining, to the extent feasible, Sockeye Spawning Beaches 2 and/or 3 until replacement production from the new facilities is developed, (ii) modifying Sockeye Spawning Beaches 2 and/or 3 to reduce leaks and to keep these beaches functional prior to decommissioning, (iii) acquiring all necessary permits from the Forest Service, (iv) configuring the pond component of the spawning beaches into a channel with a natural meander to optimize fish usage, (v) removing existing structures and restoring landscaping, and (vi) initiating adult salmon returns to the project with a temporary supplementation program;

(6) implementing a reservoir nutrient enhancement program to enhance sockeye salmon production;

(7) preparing a fish facilities operations manual that includes: (i) facility layout, flow distribution schematic, and flow procedures, (ii) emergency response, emergency personnel call-out, and security procedures, (iii) current management protocols and reporting procedures, and (iv) equipment and supplier lists, operation procedures, fish distribution procedures, and hygiene procedures based on recommendations by the Fish Co-managers;

(8) operating protocols including: (i) identifying staff responsible for implementing the Fish Propagation Facilities Plan, and (ii) the process by which the Fish Co-managers would be consulted for studies to optimize fish program success; and

(9) an annual report describing the operation of the fish propagation facilities pursuant to Proposed Article 102 including: (i) financial accounting, (ii) fish handling and disease management operations, and (iii) spill prevention and control countermeasures compliance.

Aquatics Reporting (Proposed Article 102)

- File an annual report in accordance with the schedule in Proposed Article 102 that provides: (1) the status of implementing Proposed Articles 101, 103-106, 108-110, and 401; and (2) a summary of existing resource or other agency and tribal plans (including Endangered Species Act recovery plans and the Aquatic Conservation Strategy of the Northwest Forest Plan) and a summary of any coordination between the above proposed articles and the above resource or agency plans.

Upstream Fish Passage (Proposed Article 103)

- Develop an Upstream Fish Passage Implementation Plan that includes provisions for the following: (1) trapping, sorting, holding, and hauling facilities for upstream migrating fish at the Lower Baker dam, (2) construction plans, specifications, and performance criteria; (3) operation and maintenance procedures and specifications including: (i) fish handling, (ii) hauling frequencies, (iii) attraction flow magnitudes and frequencies, (iv) species protocols, (v) trap operational flows, (vi) schedules, (vii) methods for providing annual updates, and (viii) trap reporting requirements; (4) quality assurance and control procedures; (5) operational contingencies and emergency response procedures; and (6) an annual report describing the operation of the upstream fish passage facilities pursuant to Proposed Article 102 including: (i) the number, species, and disposition of fish captured in the trap, (ii) any problems and associated remedies for operating the facilities, (iii) any proposed modifications to project facilities and/or operations, and (iv) any operational compliance deviations.

Fish Connectivity between Reservoirs (Proposed Article 104)

- Develop a Fish Connectivity Investigation Study, which may include tagging, radio-tagging, or other methods to determine the type of fishway needed to pass native char and other native fish species between Lake Shannon and Baker Lake.
- Develop a Fish Connectivity Implementation Plan that includes provisions for the following: (1) constructing a fishway between Lake Shannon and Baker Lake for native char and other native fish species which may include: (i) catch and haul operations, (ii) a temporary weir and trap on Sulphur Creek or a similar facility below the Upper Baker dam, or (iii) a permanent trap and haul facility below Upper Baker dam; (2) design accommodations for other aquatic species that do not compromise the primary focus on passage for native char; (3) construction plans, specifications, and performance criteria; (4) operation and maintenance procedures and specifications including: (i) fish handling, (ii) hauling frequencies, (iii) attraction flow magnitudes and frequencies, (iv) species protocols, (v) trap operational flows, (vi) schedules, (vii) methods for providing annual updates, and (viii) trap reporting requirements; (5) quality assurance and control procedures; (6) operational contingencies and emergency response procedures; and (7) an annual report describing the operation of the fish passage facilities pursuant to Proposed Article 102 including: (i) the number, species, and disposition of fish captured in any trap, (ii) any problems and associated remedies for operating the facilities, (iii) any proposed

modifications to project facilities and/or operations, and (iv) any operational compliance deviations.

Downstream Fish Passage (Proposed Article 105)

- Develop a Downstream Fish Passage Implementation Plan that includes provisions for the following: (1) attraction, guidance, trapping, sorting, holding, and hauling facilities for downstream migrating fish at the Upper and Lower Baker dams; (2) construction plans, specifications, and performance criteria including: (i) a guide net, (ii) a Floating Surface Collector (FSC), (iii) a transition structure between the guide net and FSC, (iv) a transportation conduit, (v) a floating fish trap, (vi) transfer facilities, (vii) hauling vehicles, and (viii) stress-relief ponds; (3) a schedule for installing downstream fish passage facilities including: (i) Upper Baker Phase 1 - installing and operating a 500-cfs FSC (with 1,000-cfs pumping capacity) and ancillary facilities by March 2008, (ii) Lower Baker Phase 1 - installing and operating a 500-cfs FSC (with 1,000-cfs pumping capacity) and ancillary facilities by March 2012; (iii) Upper Baker Phase 2 - if the facilities under the Upper Baker Phase 1 fail to meet performance criteria in the Downstream Fish Passage Implementation Plan, then, at the direction of the Commission, expanding and operating the 500-cfs FSC to 1,000 cfs within 5 years of completing Phase 1; and (iv) Lower Baker Phase 2 - if the facilities under Lower Baker Phase 1 fail to meet the performance criteria in the Downstream Fish Passage Implementation Plan, then, at the direction of the Commission, expanding and operating the 500-cfs FSC to 1,000 cfs; (4) operation and maintenance procedures and specifications including: (i) a facility operation schedule, (ii) any special FSC operations, (iii) fish sampling, (iv) fish handling protocols, (v) holding and release protocols, (vi) transport loading rates, (vii) weekly reporting of trap counts, (viii) methods for providing annual updates, and (ix) an implementation schedule; (5) quality assurance and control procedures; (6) operational contingencies and emergency response procedures; and (7) an annual report describing the operation of the downstream fish passage facilities pursuant to Proposed Article 102 including: (i) the number, species, and disposition of fish captured in the trap, (ii) any problems and associated remedies for operating the facilities, (iii) any proposed modifications to project facilities and/or operations, and (iv) any operational compliance deviations.

Flow Implementation (Proposed Article 106)

- Develop a Lower Baker Powerhouse Construction Plan that includes provisions for the following: (1) installing two new generating units each with approximately 750 cfs capacity at the Lower Baker dam, and (2) a construction schedule that has the two new generating units operational within 6 years.

- Until the two new units at the Lower Baker dam are operational, release flows at the Lower Baker dam in accordance with the Interim Protection Plan filed as Appendix C to the license application, and: (1) use best efforts to reduce Lower Baker maximum flows from 4,100 to 3,200 cfs between September 1 and December 31 annually; (2) use best efforts to follow ramping rates contained in Aquatics Table 1, and; (3) use best efforts to limit the rate of change of incrementally decreasing flows, limit the amount of daily amplitude change, and minimize the difference between spawning and incubation flows.
- Develop a Flow Implementation Plan that includes provisions for the following: (1) incorporating Aquatics Tables 1 and 2 and Aquatics Ramping Rate Figures A and B contained in Proposed Article 106; (2) releasing flows at Lower Baker after the two new 750-cfs turbine-generating units are operational in accordance with: (i) Aquatic Tables 1, or (ii) Aquatics Table 2 if flood regulation storage is provided at Lower Baker in accordance with Proposed Article 107; (3) developing a process and criteria for modifying the Flow Implementation Plan including Aquatics Tables 1 and 2; (4) providing downramping rates for the Skagit River at river mile 56.5 of 0, 1, or 2 inches per hour, according to the schedule provided in Tables 1 and 2, when Skagit River flows immediately upstream of the Baker River confluence are less than or equal to 26,000 cfs; (5) temporarily suspending or modifying flows and ramping rates in the Flow Implementation Plan in the event of drought conditions or other natural events outside the licensee's control or emergency situations where the project or public would be at risk; (6) reporting temporary modifications and deviations from the Flow Implementation Plan to the Commission and other entities; (7) an annual report describing implementation of the Flow Implementation Plan pursuant to Proposed Article 102; and (8) modifying project operations to protect aquatic resources if a conflict arises between the ramping rates or flow regimes in the Flow Implementation Plan and the flood regulation storage in Proposed Article 107.

Flood Regulation (Proposed Article 107)

- Operate the Upper Baker development to provide 16,000 acre-feet of flood regulation storage between October 15 and March 1 annually and an additional 58,000 acre-feet of flood regulation storage between September 1 and April 15 annually (total 74,000 acre-feet) as directed by the U.S. Army Corps of Engineers, provided the licensee is compensated for providing any flood regulation storage above 16,000 acre-feet.
- Operate the Lower Baker development to provide up to 29,000 acre-feet of flood regulation storage between October 1 and March 1 annually, as directed

by the U.S. Army Corps of Engineers, provided the licensee is compensated for this storage.

- These storage requirements may be temporarily modified if required by operating emergencies beyond the control of the licensee, and for short periods upon agreement between the licensee and the U.S. Army Corps of Engineers. If storage requirements are so modified, the licensee shall notify the Commission as soon as possible, but not later than 10 days after each such incident.
- Review project operations and develop procedures to address imminent flood events, which may include lowering project reservoirs below flood regulation storage levels, and file a plan for Commission approval with: (i) any proposed changes to project operations and (ii) an analysis of how any proposed changes may affect the safety and adequacy of project structures.
- Notify the Commission's Division of Dam Safety and Inspections, Portland Regional Engineer, when the Corps assumes operational control of the project for flood regulation purposes and when the Corps returns operational control to the licensee.
- The Commission reserves the right to modify flood control operations at the project upon its own motion or upon the recommendation of the U.S. Army Corps of Engineers, after notice and opportunity for hearing.

Gravel Augmentation (Proposed Article 108)

- Develop a Gravel Management Plan that includes provisions for the following: (1) describing existing and proposed gravel augmentation measures intended to improve the geomorphic function of the Lower Baker River alluvial fan and Skagit River downstream of the Baker River confluence; (2) addressing location and contribution of gravel and cobble-sized material in the affected reach, condition and substrate attrition rates, and substrate sizes in relation to the biological needs of salmonids and other aquatic organisms; (3) establishing procedures for evaluating and monitoring Skagit River conditions, including tracking long-term trends in the substrate profile degradation, to determine when to provide gravel augmentation up to an annual limit of 12,500 tons; (4) establishing implementation guidelines and triggers for gravel augmentation; and (5) an annual report describing implementation of the Baker River Gravel Management Plan pursuant to Proposed Article 102.

Large Woody Debris (Proposed Article 109)

- Develop a Large Woody Debris (LWD) Management Plan that includes provisions for the following: (1) collecting LWD, defined as wood with a diameter of at least 1 foot and a length of at least 8 feet, from project reservoirs; (2) stockpiling LWD on lands within the current project boundary or as close to the project as possible; (3) a 20-year target for collecting and stockpiling: (i) 2,960 pieces of LWD with a diameter of 1 to 2 feet, (ii) 540 pieces of LWD with a diameter of 2 to 3 feet, and (iii) 160 pieces of LWD with a diameter greater than 3 feet; (4) annual LWD targets designed to meet the above 20-year target; (5) reassessing the above 20-year and annual targets after the first 20 years based on actual LWD collection and stockpiling; (6) the location of any LWD stockpiles relative to the project boundary and the location and acreage of any federal lands involved; (7) a proposal to modify any project facilities and boundaries; and (8) an annual report describing implementation of the LWD Management Plan pursuant to Proposed Article 102.

Shoreline Erosion (Proposed Article 110)

- Develop a Shoreline Erosion Control Plan that includes provisions for the following: (1) site specific plans to prevent and control erosion along both project reservoirs; (2) criteria for selecting and prioritizing sites giving first priority to recreation sites, heritage/cultural sites, and aesthetic resources and giving second priority to sites rated as severe or high in relicensing Study A14a filed April 22, 2005; (3) survey protocols including procedures to measure geology, vegetation, and erosion rates; (4) treatment methods, standards, and goals including treatment using vegetation and/or bioengineering, anchored logs, riprap vestment, rock and crib walls, perched beaches, and drift sills; (5) monitoring to assess treatment effectiveness and to identify new sites needing treatment; and (6) an annual report describing implementation of the Shoreline Erosion Control Plan pursuant to Proposed Article 102.

Programmatic Agreement (Proposed Article 201)

- Implement the “Programmatic Agreement Between the Federal Energy Regulatory Commission and the Washington State Historic Preservation Officer for Managing Historic Properties that May be Affected by a License Issuing to Puget Sound Energy for the Continued Operation of the Baker River Hydroelectric Project in Skagit and Whatcom Counties, Washington (FERC Project No. P-2150)” and develop and implement a final Historic Properties Management Plan (HPMP) based on the “draft” HPMP dated April 26, 2004.

Recreation Management Report (Proposed Article 301)

- File an annual report in accordance with the schedule in Proposed Article 301 that provides: (1) the status of implementing Proposed Articles 302, 303, and 305-315, as modified accordingly; (2) a list and summary of each plan approved under the above articles; and (3) a summary of expenditures for the above articles made during the preceding year.

Aesthetics Management (Proposed Article 302)

- Develop an Aesthetics Management Plan that includes provisions for the following: (1) painting the pump station (off-peak pump discharge facility) in neutral earth-tone colors and planting native vegetation to screen this facility from the West Pass dike boat launch area; (2) planting native vegetation to screen the yards, buildings, and fence of the Upper Baker operations and maintenance yards from the Kulshan campground and Forest Service road 1106; (3) painting the existing crane at the Lower Baker dam a neutral earth-tone color during the next normal painting cycle and during subsequent painting cycles; (4) landscaping in the area near the visitor's center and associated parking area at the Lower Baker River operations complex center; and (5) vegetation management at the following five campgrounds: Panorama Point, Horseshoe Cove, Shannon Creek, Bayview, and Maple Grove.

Upper Baker Developed Recreation (Proposed Articles 303, 309, 310, 312, 313, and 314)

- Develop an Upper Baker Developed Recreation Plan that includes provisions for the following: (1) redeveloping (as necessary), maintaining, and operating: Panorama Point, Horseshoe Cove, Shannon Creek, Bayview, and Maple Grove campgrounds, and the Baker Lake Resort; (2) removing the existing cabins and redeveloping the Baker Lake Resort with 30 to 50 campsites; (3) monitoring site use and occupancy levels at Panorama Point, Horseshoe Cove, Shannon Creek, Bayview, and Maple Grove campgrounds, and the Baker Lake Resort; (4) constructing and maintaining up to 6 miles of new multi-season, multi-use, non-motorized trails as close to the project as possible; (5) redeveloping (as necessary), maintaining, and operating the Baker Lake trail, Baker Lake trail north and south trailheads, and an approximate 1-mile-long section of the Baker River trail (from FR 1168 to the Baker Lake trail); (6) a discussion of how the needs of the disabled are considered in the design of the above facilities; (7) operation and maintenance costs of the above facilities; (8) schematic drawings of the above facilities; (9) the location of any of the above facilities on non-project lands relative to the project boundary, and; (10) a proposal to modify any project facilities and boundaries;

Lower Baker Developed Recreation (Proposed Article 305)

- Develop a Lower Baker Recreation Plan that includes provisions for the following: (1) at the existing recreation site replace the gravel boat launch with a concrete boat launch; develop parking and day use facilities; and install portable toilets; (2) operation and maintenance cost estimates; (3) schematic drawings of the facilities; (4) an implementation schedule; (5) a discussion of how the needs of the disabled are considered in the design of the facilities; (6) a discussion of how recreationists will access the site and any need for additional rights to ensure the site is accessible for the term of the license; and (7) continued operation of the Lower Baker Visitor Center, including existing interpretive and education programs, informational exhibits, and facilities maintenance;

Upper Baker Visitor Information Services (Proposed Articles 306 and 307)

- Develop an Interpretation and Education Plan for the Baker River Project that includes provisions for the following: (1) constructing and operating a Visitor Information Station (VIS) at Baker Lake on lands within the project boundary; (2) staffing the VIS from Memorial Day through Labor Day; (3) information about the project, such as local culture and history, environmental resources, and recreational opportunities; (4) how the needs of the disabled are considered in the design of the VIS; and (5) operation and maintenance costs.

Dispersed Recreation Management (Proposed Article 308)

- Develop a Dispersed Recreation Management Plan that includes provisions for the following: (1) hardening of agreed-upon three to six dispersed recreation sites identified in Table 3-1 of the Dispersed Site Inventory Study (Study R-12) dated February 2004; (2) the location of any dispersed recreation sites on non-project lands relative to the project boundary and the location and acreage of any federal lands involved; (3) a proposal to modify any project facilities and boundaries; (4) vault toilet(s); and (5) site clean-up (i.e. trash removal)

Lower Baker Trails (Proposed Articles 311 & 315)

- Develop a Lower Baker Trail Plan that includes provisions for the following: (1) constructing up to two miles of trails in the Baker River Project vicinity focusing on the Lower Baker development; (2) site selection; (3) operation and maintenance cost estimates; (4) the entity or entities that would be responsible for constructing and maintaining the Lower Baker Trails; (5) how the needs of the disabled are considered in the design of the trails; (6) the location of any

proposed trails on non-project lands relative to the project boundary and the location and acreage of any federal lands involved; and (7) a proposal to modify any project facilities and boundaries.

Road Maintenance and Access Plan (Proposed Articles 316 and 317)

- Develop a Road Maintenance and Access Plan that includes provisions for the following: (1) maintaining the following roads: FR 11 (Baker Lake Highway) from its intersection with FR 1106 to its intersection with FR 1168; FR 1106 (Depression Lake); FR 1107 (Anderson Road) from its intersection with FR 1106 to the Baker Lake south trailhead; FR 1118 (Horseshoe Cove and Bayview); FR 1137 (Panorama Point); FR 1142 (Baker Lake Resort); FR 1150 (Shannon Creek campground); and FR 1168 (Baker River trailhead); (2) maintaining the following additional roads if needed to access 3 to 6 dispersed recreation sites identified in the Upper Baker Dispersed Recreation Plan: FR 1122 (Lower Sandy Creek), and FR 1136 (Lower Boulder Creek); (3) paving FR 1106; and (4) providing public access to the east side of Baker Lake on FR 1106 except as may be restricted by short-term public safety or Baker River Project security requirements;

Water Quality (Proposed Article 401)

- Develop a Water Quality Monitoring Plan that includes provisions for the following: (1) monitoring project waters for State of Washington water quality standards at the project for the term of the license in accordance with a specified monitoring schedule; (2) based on monitoring results, assessing consistency with State of Washington water quality standards and any proposed measures to enhance water quality; and (3) an annual report describing implementation of the Water Quality Monitoring Plan pursuant to Proposed Article 102.
- Develop a Water Quality Protection Plan that includes provisions for the following: (1) controlling pollutants from project construction, operation, or emergencies including, but not limited to: (i) access roads, (ii) boat ramps, (iii) transmission corridors, (iv) structures, (v) portable toilets, (vi) hatcheries and fish collection, handling, and transportation facilities, and (vii) staging areas for all activities related to project operation, maintenance, and repair; (2) stormwater pollution and prevention measures that: (i) specify Best Management Practices (BMPs) and other control measures to prevent contaminants from entering surface and ground waters, (ii) address pollution control measures for project activities that could lead to the discharge of stormwater or other contaminated water from upland areas, (iii) specify the management of chemicals, hazardous materials and petroleum (spill prevention

and containment measures), including refueling procedures, the measures to take in the event of a spill, and reporting and training requirements, and (iv) specify water quality monitoring protocols and notification requirements; (3) in-water work protection measures that: (i) specify BMPs and other control measures for the licensee's work within surface waters, including application of herbicides, pesticides, fungicides, disinfectants, and lake fertilization, and (ii) address water quality monitoring provisions for all in-water work; (4) an annual report describing implementation of the Water Quality Protection Plan pursuant to Proposed Article 102; and (5) maintaining minimum reservoir levels of 389 feet in Lake Shannon and 685 feet in Baker Lake to minimize the resuspension of sediments as a result of project operations.

Terrestrial Resources Management Report (Proposed Article 501)

- File an annual report in accordance with the schedule in Proposed Article 501 that provides: (1) the status of implementing Proposed Articles 502-504 and 506-514; and (2) a summary of expenditures for the above articles made during the preceding year.

Deciduous Forest Habitat (Proposed Article 502)

- Develop a Deciduous Forest Habitat Plan that includes provisions for the following: (1) acquiring deciduous forest habitat containing at least 40 percent deciduous tree composition; (2) number of acres to be acquired; (3) any specific enhancement and management actions to be taken on acquired lands; (4) the location of acquired parcels of non-project lands relative to the project boundary and the location and acreage of any federal lands involved; and (5) a proposal to modify any project facilities and boundaries.

Elk Habitat (Proposed Article 503)

- Develop an Elk Habitat Plan that includes provisions for the following: (1) acquiring an initial track(s) of 300 acres of elk foraging habitat and the total number of acres to be acquired under the plan; (2) calculating elk forage equivalency values by multiplying the number of acres of each habitat type enhanced and/or acquired by the corresponding elk forage equivalency score shown in the elk habitat table contained in Proposed Article 503; (3) a discussion of the feasibility of creating cultivated pastures or making other elk foraging habitat improvements on project lands or acquiring this habitat and making improvements on non-project lands as close to the project as possible; (4) criteria and procedures for site selection, acquisition and management; (5) any specific enhancement and management actions to be taken on any lands acquired; (6) the location of any proposed acquired parcels of non-project

lands relative to the project boundary and the location and acreage of any federal lands involved; and (7) a proposal to modify any project facilities and boundaries.

Wetland Habitat (Proposed Article 504)

- Develop a Wetland Habitat Plan that includes provisions for the following: (1) enhancing and/or acquiring wetlands to benefit wetland-dependent species including native amphibians; (2) a discussion of the feasibility of enhancing wetlands adjacent to Baker Lake or Lake Shannon on project lands or acquiring this habitat and making improvements on non-project lands as close to the project as possible; (3) the number of acres to be enhanced and/or acquired; (4) criteria and procedures for site selection, acquisition and management; (5) any specific enhancement and management actions to be taken on any lands acquired; (6) the location of any proposed acquired parcels of non-project lands relative to the project boundary and the location and acreage of any federal lands involved; and (7) a proposal to modify any project facilities and boundaries.

Osprey Nest Structures (Proposed Article 506)

- Provide and maintain a minimum of 10 artificial nesting structures at Lake Shannon consisting of nine existing structures and at least one new structure installed at the site of a former natural snag nest or artificial nesting structure with the goal of producing seven breeding pairs of osprey at Lake Shannon.
- Select and modify 10 mature trees at Lake Shannon to promote their eventual use as osprey nesting structures. Trees may be modified by topping, killing, or other appropriate techniques based on site-specific evaluations.
- Monitor osprey nesting and productivity annually between April 1 and August 31 at Lake Shannon and Baker Lake and inspect and maintain the 10 artificial nesting structures every two years to ensure continued availability for osprey.
- File a monitoring report with the Commission by June 1 of the year following each two-year inspection and maintenance cycle. The report should describe inspection results, maintenance performed, and nesting activity at both artificial nesting structures and modified trees at Lake Shannon and Baker Lake during the preceding two years and should determine whether additional artificial nesting structures or modifications to the placement and design of existing artificial nesting structures are needed to achieve the goal of seven breeding pairs of osprey at Lake Shannon.

Floating Loon Nest Platforms (Proposed Article 507)

- Install and maintain three floating nesting platforms for common loons on Lake Shannon and/or Baker Lake with the goal of establishing common loon nesting on project reservoirs.
- Log booms, boundary buoys or other appropriate devices should be placed around nesting platforms, as needed, to restrict public access. Nesting platforms and any devices to restrict public access should be installed April 1 to July 31 annually.
- Monitor all nesting platforms twice a month April 1 to July 31 annually to determine nesting activity, nesting attempts, nest productivity and the effectiveness of public access restrictions and file a report with the Commission by June 1 each year summarizing monitoring data and platform maintenance activities.
- Install three additional nesting platforms (total six) on Lake Shannon and/or Baker Lake if loons successfully nest on platforms. If loons do not successfully nest on platforms within 15 years, the nesting platform program should be discontinued.

Noxious Weeds (Proposed Article 508)

- Develop a Noxious Weed Control Plan that includes provisions for the following: (1) controlling noxious weeds on project lands pursuant to applicable state and federal regulations; (2) site-specific and species-specific management and monitoring programs for project lands based on the guidelines and treatment options identified in Appendix A-1 of the Settlement Agreement; (3) controlling noxious weeds on lands surveyed and identified in study T-6 (figures 1 and 2) and including these lands in the project boundary; (4) controlling noxious weeds, with priority on controlling reed canarygrass, at wetlands identified as WB 17, 20, 21, 25, 28, 29, and 30 in studies T-2 and T-5 (figure 5), and including these lands in the project boundary; and (5) controlling noxious weeds on any lands acquired and added to the project boundary in the future as directed by the Commission.

Special Status Plants (Proposed Article 509)

- Develop a Special Status Plants Plan that includes provisions for the following: (1) managing special status plants on project lands surveyed and identified in study T-16 (figures 1 and 2) and Appendix A-2 of the Settlement Agreement that are: (i) listed as endangered, threatened or proposed for listing under the Endangered Species Act, (ii) listed as endangered, threatened or sensitive by

the State of Washington, and (iii) listed by the Forest Service on the Pacific Northwest Regional Forester's sensitive species list; (2) site-specific and species-specific management and monitoring programs for project lands based on the guidelines identified in Appendix A-3 of the Settlement Agreement; and (3) managing special status plants on any lands acquired and added to the project boundary in the future as directed by the Commission.

***Carex flava* (Proposed Article 510)**

- Develop a *Carex flava* (yellow sedge) Management Plan that includes provisions for the following: (1) surveying and mapping *Carex flava* populations at Baker Lake; (2) managing and protecting identified *Carex flava* populations on project lands especially in areas where reed canarygrass on project lands exists; (3) strategies to control reed canarygrass near *Carex flava* populations; and (4) site-specific management and monitoring programs based on the guidelines identified in Appendix A-4 of the Settlement Agreement including a planting program if *Carex flava* populations decline.

Decaying and Legacy Wood (Proposed Article 511)

- Develop a Decaying and Legacy Wood (old growth) Management Plan that includes provisions for the following: (1) managing snags, logs and residual live trees on project lands for snag and log dependent species including cavity excavators; (2) retaining existing snags, logs and residual live trees or promoting the development of these features when necessary; (3) specific management objectives; (4) providing artificial structures where natural snags, logs and residual live trees are not present and are not expected to develop during the term of any license; and (5) managing snags, logs and residual live trees on any lands acquired and added to the project boundary in the future as directed by the Commission.

Bald Eagle Night Roosts (Proposed Article 512)

- Conduct two surveys 15 years apart to identify the location of any bald eagle night roosts on project lands or in the immediate vicinity of the project and file the survey results and any proposals to protect identified roosting areas with the Commission.

Bald Eagle Management (Proposed Article 513)

- Develop a Bald Eagle Management Plan that includes provisions for the following: (1) managing bald eagle nest and night roosts on project lands to protect bald eagles; (2) periodic surveys of project lands to identify new nests

or night roosts which should be added to the plan; and (3) surveys of any lands acquired and added to the project boundary in the future as directed by the Commission.

Habitat Evaluation Procedures (Proposed Article 514)

- Develop a Habitat Evaluation Procedures Plan that includes provisions for the following: (1) monitoring the effectiveness of implementing Proposed Articles 502-504, 506, 507, and 513 through periodic assessments of habitat quantity and quality using the U.S. Fish and Wildlife Service's Habitat Evaluation Procedures or other appropriate methodology; (2) monitoring should determine the current conditions of any lands acquired and assess the effectiveness of any enhancement and management actions taken on those lands; and (3) a schedule for specific monitoring actions, monitoring criteria, and the format for monitoring reports.

Late Seral Forest (Proposed Article 515)

- Develop a Late Seral Forest Enhancement Plan that includes provisions for the following: (1) thinning trees on 321 acres of second-growth forest to accelerate late-seral forest growth and increase nesting success and/or survival of spotted owls and marbled murrelets; (2) a discussion of the feasibility of thinning trees on project lands or making these improvements on non-project lands as close to the project as possible; and (3) criteria and procedures for site selection.

Mountain Goats (Proposed Article 516)

- Develop a Mountain Goat Habitat Enhancement Plan that includes provisions for the following: (1) improving foraging habitat on 194 acres of land to benefit mountain goats which may include, but is not limited to, prescribed burns and thinning trees; (2) criteria and procedures for site selection, acquisition and management; (3) any specific enhancement and management actions to be taken on lands acquired; (4) the location of any proposed acquired parcels of non-project lands relative to the project boundary and the location and acreage of any federal lands involved; (5) a discussion of the feasibility of making these improvements on lands as close to the project as possible; and (6) a proposal to modify any project facilities and boundaries.

Grizzly Bears (Proposed Article 517)

- Develop a Grizzly Bear Road Closure Plan that includes provisions for the following: (1) closing roads in the North Cascades Grizzly Bear Recovery

Area of the Mt. Baker-Snoqualmie National Forest to reduce human use and disturbance and to increase the effectiveness of spring and early summer grizzly bear foraging habitat; (2) criteria and procedures for selecting and closing roads; (3) permitting requirements from the U.S. Forest Services and/or other regulatory agencies; (4) the location of any gates or other devices to close roads and the location of the roads to be closed relative to the project boundary; and (5) a discussion of the feasibility of closing roads as close to the project as possible.

Baker River Coordinating Committee (Proposed Article 601)

- Develop a Technical Committee Plan that includes provisions for the following: (1) creating a Terrestrial Resources Implementation Group, a Recreation Resources Group, an Aquatics Resources Group, and a Cultural Resources Advisory Group - each responsible for providing technical comments and recommendations on the licensee's implementation of the terms and conditions in the license; (2) creating a Baker River Coordinating Committee responsible for providing policy level comments and recommendations on the licensee's implementation of the terms and conditions in any license issued for the project and for resolving disputes within the above four technical committees; (3) procedures for designating representatives, setting agendas, providing notices, holding meetings, recording decisions, and setting schedules for the above committees; (4) resolving disputes; and (5) providing annual reports.

5.1.2 Additional Measures Recommended by Staff

We recommend including the following additional measures not contained in the Settlement Agreement in any license issued for the project.

Flow Continuation Study and Facilities Plan

NMFS and WDFW recommend Puget provide a flow continuation valve at the Lower Baker development to ensure compliance with new minimum flows contained in the Settlement Agreement. Flow continuation would require a valve or valves designed to provide between 1,000 and 1,200 cfs depending on the time of year.

As discussed in section 3.3.2.2, partial flow continuation would be provided at the Lower Baker development through the use of the two new 750-cfs turbine-generator units in the proposed new auxiliary powerhouse. As designed, the two new units would add redundancy at Lower Baker enabling Puget to maintain minimum flows despite the loss of any one unit or the loss of the two new 750-cfs units.

Despite this added redundancy, it's quite likely that over the term of any new license, circumstances would periodically force more than one unit off-line thus preventing Puget from meeting the new minimum flows in the Settlement Agreement. As discussed in section 3.3.2.2, there have been 29 instances of unscheduled outages at the Lower Baker development from 1998 to 2002. A flow continuation valve(s) would greatly enhance Puget's ability to guarantee meeting their minimum flows during times of outages.

We reviewed Puget's Exhibit F drawings of the proposed new auxiliary powerhouse that would be built on the site of the abandoned powerhouse at the Lower Baker development. Puget's preliminary plans are to add two new 750-cfs turbine-generator units on two of the four existing but abandoned 8-foot diameter penstocks that are located at the site. We considered the scenario of adding regulating valves on the two remaining penstocks that would not be tapped for use by the new units. Such valves could provide the needed 1,000 to 1,200 cfs minimum flows contained in Proposed Article 106. We estimate the cost of these valves and ancillary equipment to be \$101,000 annually.

Puget has signed the Settlement Agreement, which sets forth new minimum flows and ramping rates to improve conditions in the Lower Baker River and Skagit River for fish, including the threatened Chinook salmon. These proposed flows and ramping rates, and the two new 750-cfs turbine-generator units in the new auxiliary powerhouse, are substantial investments with an estimated annual cost of \$2,423,200. Other staff-recommended fishery enhancement measures including fish propagation (Proposed Article 101), upstream fish passage (Proposed Article 103), and downstream fish passage (Proposed Article 105) would have an additional total estimated annual cost of \$5,085,900. Based on current information, it appears that future outages may prevent these investments from being fully realized, and could lead to desiccation or freezing of some salmonid eggs and pre-emergent alevins. However, we are uncertain about how often these future outages may actually occur and lead to a loss of minimum flows below the project once the new units are installed.

Further, there is a high annual cost (\$101,000) associated with construction of flow continuation facilities; therefore, we recommend that Puget first conduct an analysis of the benefits and need for these facilities.

We recommend Puget consult with NMFS, FWS, WDFW and the tribes and develop a Flow Continuation Study and Facilities Plan, as follows:

- Develop a Flow Continuation Study and Facilities Plan that includes provisions for the following: (1) studying the need for one or more valves, other equipment, and operation procedures (flow continuation facilities) to maintain minimum flows during project outages; (2) this study should include a

comparison of the project's ability to meet minimum flows with and without flow continuation facilities during project outages and a comparison of river stages in the Baker and Skagit Rivers downstream of the project with and without flow continuation facilities during project outages; (3) the anticipated environmental benefits of installing flow continuation facilities; (4) the estimated costs of installing flow continuation facilities and making any operational changes, and; (5) filing a report with the results of the above study and a plan to install flow continuation facilities if warranted. The Commission reserves the right to require flow continuation facilities to maintain minimum flows during project outages based on the results of the above study;

Inspections, Reports, and Notification

NMFS and WDFW recommend Puget schedule annual operation inspections for agencies and tribes to ensure that fish protection measures are functioning as expected. NMFS and WDFW also recommend Puget permit the agencies and tribes to inspect the project at any reasonable time before, during or after construction to evaluate activities that may affect fish and wildlife protection, mitigation, and enhancement measures. Both agencies recommend Puget maintain and make available a record of project operations including the daily amount of diversion, spill and fluctuation for all flows. In addition, NMFS recommends Puget document all unusual occurrences such as load rejections; powerhouse mechanical problems; turbine, intake and fish screen failures; and sedimentation events. NMFS says such events should be brought to the agencies' attention immediately.

Determining compliance with the terms and conditions in a license is the Commission's responsibility; therefore, we do not recommend that Puget demonstrate operational compliance to entities other than the Commission. The Commission already conducts periodic safety and environmental compliance inspections as part of the administration of issued licenses.

However, providing the agencies and tribes with copies of operational records upon request and allowing access to the project in the performance of their official duties would help ensure that the agencies and tribes remain informed about the construction and operation of fish protection measures at the project. Agencies and tribes could then provide Puget with timely feedback, which should help Puget implement fish protection measures contained in any license issued for the project. We estimate that there would be minimal additional costs for the above recommended measures, because we anticipate that many of these measures would be contained in Puget's proposed fish protection plans under the Settlement Agreement, including Puget's: (1) Fish Propagation Facilities Plan (Proposed Article 101); (2) Upstream Fish Passage Implementation Plan (Proposed Article 103); (3) Fish Connectivity Implementation Plan (Proposed Article 104); (4) Downstream Fish Passage Implementation Plan (Proposed Article 105); and (5) Flow

Implementation Plan (Proposed Article 106). We find that the benefits of providing access, reports and notifying the agencies, as recommended by NMFS and WDFW, justify the minimal additional costs and would be in the public interest.

5.1.3 Modifications Recommended by Staff

Staff-recommended modifications to those measures in the Settlement Agreement we recommend (section 5.1.1) are discussed below:

Fish Propagation

Proposed Article 101 includes a schedule for completing fish propagation and enhancement programs under the proposed article. However, this schedule addresses more than just the timing of various fish propagation and enhancement actions. The schedule includes substantive performance criteria for operating these programs. We recommend implementing this schedule, including the performance criteria, with the exceptions discussed below.

We do not recommend Puget resume a basin sockeye salmon fry productivity study in 2006 – as shown on the schedule. We are not aware that Puget began such a study in the past and Puget has not provided information on the specific details of the study (i.e. the study’s objectives, methods, and timing); therefore, we have no basis for recommending Puget resume this study as described in the schedule.

We note that the schedule contains a provision that Puget should comply with any revisions to the schedule that may be directed by the Fish Resource Parties. We note that all revisions to a license, no matter how small, are by definition amendments, although the procedural and substantive requirements will vary according to the nature of the amendment.⁴⁷ As such, we do not recommend including license requirements allowing Puget the discretion to implement modifications to previously Commission-approved plans without prior Commission approval. If modifications are desired during the term of any license issued for the project, Puget could on a case-by-case basis consult with the Commission’s Division of Hydropower Administration and Compliance on appropriate procedures to follow for implementing such modifications.

Flood Regulation

Proposed Article 107 addresses flood control at the project and requires Puget, in part, to review project operations and develop procedures to address imminent flood events. Puget must file a plan with any new procedures for Commission approval.

⁴⁷See Consumers Energy Company and The Detroit Edison Company, 87 FERC ¶ 61, 150 (1999) (P-2680, Ludington).

Puget should include in its plan an analysis of how any new procedures would affect the safety and adequacy of project structures. Such an analysis would be needed before the Commission could act on the plan.

In addition, we recommend adding additional language to Proposed Article 107 to permit Puget to temporarily modify storage requirements if required by an emergency and if the Corps mutually agrees to the modification. Such language is typically included in the Commission's license articles to permit temporary deviations from license requirements for reasons that are beyond the licensee's control. We recommend that should the storage provision be temporarily modified, Puget notify the Commission as soon as possible, but not later than 10 days after each such incident.

We also recommend that the license include a reopener provision that would enable the Commission to modify flood control operations at the project upon its own motion or upon the recommendation of the U.S. Army Corps of Engineers, after notice and opportunity for hearing.

As currently written, Proposed Article 107(a) would require Puget to provide "up to a maximum of 58,000 acre-feet" of additional storage as may be requested by the Corps from "about September 1 to April 15." The use of the word "about" does not conform to standard license article language; a license article must be written in a fashion that enables the Commission to determine compliance with the article. We recommend removing the word "about" and any terms in proposed license articles that make compliance with the article difficult to determine. Also, because the word "maximum" does not add useful meaning to the aforementioned storage volume of 58,000 acre-feet, we recommend removing this word as well.

As discussed in section 3.3.2.2, we do not recommend adopting recommendations from the City of Mount Vernon, Washington, the Skagit County Dike Districts No. 1, 12, and 17, and the City of Burlington, Washington to retain the existing cap of 100,000 acre-feet of flood control storage at Upper Baker as required by Article 32 of the current license. We conclude from our analysis that this proposal would produce limited or no additional benefits, especially without costly modification to Upper Baker dam. Requiring Upper Baker dam to be modified now, so the 100,000 acre-feet of storage can be fully realized, would represent an irretrievable commitment of funds and may not be the most cost-effective alternative for decreasing flood damages in the Skagit River.

Although we do not recommend requiring Puget to make an irretrievable commitment of funds to maintain 100,000 acre-feet of flood control storage at Upper Baker dam based upon the information available at this time, the Corps is evaluating all flood damage reduction alternatives in the basin, including additional storage and/or modified operations and structures at the Baker River Project. Appropriate reopener

provisions in the license would ensure the Commission could require additional flood control measures, as needed, after the Corps has completed its GI study and has provided study results and any recommendations for Commission approval.

We recommend the 29,000 acre-feet of flood control storage proposed in Proposed Article 107(b) because, based on the best available information, this measure has significant flood control potential, it is part of the Settlement Agreement and its implementation would be contingent on a finding that providing flood control storage at the Lower Baker dam is a feasible and cost-effective flood control measure. We note that by requiring (subject to the Corps' request) up to 29,000 acre-feet of storage at Lower Baker dam and up to 74,000 acre-feet of storage at Upper Baker dam, the project would provide a combined total of up to 103,000 acre-feet of flood control storage.

We recommend the flood control provisions in Proposed Article 107 with the above described revisions.

Large Woody Debris

Proposed Article 109 would require Puget to develop a Large Woody Debris (LWD) Management Plan for collecting and stockpiling LWD intercepted by the project. LWD could be stockpiled on lands anywhere within the Baker River basin and would be made available for others to use in various fishery and aquatic enhancement projects in the Baker and Skagit River basins.

We recommend this measure. Because Puget would be responsible for the long-term operation and maintenance of the sites, we also recommend that these sites be included in the project boundary if not already done so through other requirements of any license issued for the project. We recommend that the location of Puget's LWD stockpile site(s) and Puget's long-term responsibilities be identified in the LWD Management Plan.

Programmatic Agreement

Proposed Article 201 would require Puget to implement a Programmatic Agreement and including but not limited to an approved HPMP. Puget would also be required to provide an annual summary of expenditures made during the preceding year, along with an accounting of funding expenditures, interest earned, disbursements made, and a report indicating adjustments made for inflation.

We recommend that Puget develop and implement a final HPMP after any license issuance. We discuss the Settlement Parties' comments in section 3.3.7. The components of an HPMP are discussed in section 3.3.7.2. Implementing this measure would cost an estimated \$217,700 annually.

We do not recommend the other provisions of Proposed Article 201 in which Puget would be required to provide an annual summary of expenditures, along with an accounting of funding expenditures, interest earned, disbursements made, and a report indicating adjustments made for inflation. We find this information is not needed for Commission approval of the HPMP. The Settlement Parties have not indicated to us why this information would be useful to determine Puget's compliance with the HPMP.

Recreation Management Report

Proposed Article 301 would require Puget to consult with the Recreation Resources Group and file a report with the Commission each year that would contain, in summary: (1) the implementation status of Proposed Articles 302-315; (2) a compilation of the plans required by Proposed Articles 302-305, 311, and 318; (3) an updated Appendix A-5 showing any revisions to proposed funding; and (4) a summary of expenditures, earned interest, disbursements, adjustments for inflation, and other accounting information.

Because we are now recommending many of Puget's proposed recreation articles, we recommend a consolidated recreation report envisioned in Proposed Article 301, but with modifications. This report would consolidate the monitoring results of most other proposed recreation measures into one annual report for stakeholder and Commission review. As discussed in section 3.3.8.2, such a report would help stakeholders and the Commission track Puget's implementation of recreation measures at the project.

However, we do not recommend the report include an implementation schedule similar to the "Recreation Implementation Schedule" contained in Appendix A-5 to the Settlement Agreement. We also do not recommend Puget annually update this schedule: should its funding priorities change; to acknowledge when funding obligations are satisfied; should the Forest Service's management objectives and funding priorities change; or to acknowledge when funding is provided by third parties. Although we recommend the report contain a summary of expenditures made during the preceding year, we do not recommend this summary include an accounting of funding expenditures, interest earned, disbursements, and adjustments made for inflation because the information is not needed for Commission action. We recommend Puget implement the specific measures that would be accomplished by that funding.

Aesthetic Management

Proposed Article 302 would require Puget to develop an Aesthetic Management Plan for painting certain project facilities in neutral, earth-tone colors and for planting vegetation and landscaping around various project features. The article also requires Puget to provide (1) funds to the Forest Service for vegetation management at Forest Service campgrounds, including Panorama Point, Horseshoe Cove, Shannon Creek,

Bayview, and Maple Grove, and (2) funds for two to four yet to be identified Forest Service developed sites and/or viewpoints that average less than 0.25-acre in size.

We recommend this measure except for the provision that requires Puget to provide funds to the Forest Service for vegetation management at the aforementioned five campgrounds and at Forest Service developed sites and/or viewpoints and Baker Lake in two to four locations averaging less than 0.25-acre in size.

As discussed in section 3.3.8.2, we recommend making the aforementioned campgrounds project facilities and bringing them into the project boundary; the associated vegetation management would be Puget's responsibility because the campgrounds are necessary for project purposes. However, we have no objections to Puget entering into an agreement with any other party to operate and maintain the facilities. These campgrounds could enhance recreational resources and help meet a need for a variety of recreational experiences and activities. Improving these sites through the Aesthetics Management Plan could provide for a better recreational experience. Moreover, no parties objected to potentially requiring the Forest Service recreation sites to be brought into the Baker River Project boundary. We do not recommend component (2) of the measure because neither Puget nor the Forest Service have identified the location of the sites, whether they would be project or non-project sites, and the level of development at these sites which may affect any decision to manage vegetation.

At an estimated cost of \$19,200 annually, we find the benefits of an Aesthetic Management Plan would justify the cost, and therefore, recommend that Puget develop and implement an Aesthetic Management Plan for the project.

Upper Baker Developed Recreation

Proposed Article 303 would require Puget to prepare a plan to redevelop the Baker Lake Resort into a campground with 30 to 50 campsites. Puget would also be required to provide funds to the Forest Service for redeveloping the resort. Proposed Article 309 would require Puget to provide funds to the Forest Service for redeveloping the 28-unit Bayview Campground. Proposed Article 310 would require Puget to provide funds to the Forest Service for developing up to 6 miles of new trails in the project vicinity. Proposed Article 312 would require Puget to monitor site use and occupancy levels at Panorama Point, Horseshoe Cove, Shannon Creek, Bayview, Maple Grove, and the Baker Lake Resort. Proposed Article 313 would require Puget to: (1) provide funds to the Forest Service to operate and maintain Panorama Point, Horseshoe Cove, Shannon Creek, Bayview, Maple Grove, and the Baker Lake Resort, and any possibly future recreation sites developed under other proposed articles; and (2) enter into a reimbursable maintenance agreement with the Forest Service concerning funding. This agreement would set forth how Puget funds and receives credit for maintenance expenditures at

Forest Service developed campgrounds. Proposed Article 314 would require Puget to maintain the Baker River Trail, Baker Lake Trail, and Baker Lake Trailheads.

We find that Panorama Point, Horseshoe Cove, Shannon Creek, Bayview, and Maple Grove campgrounds and the Baker Lake Resort, along with the approximate 6 miles of new trails, are needed for project purposes as discussed below.

As Interior notes in its June 16, 2006, filing, trail development provides an opportunity to meet a need and address a common recreation use in the project area. We note that if measures on non-project lands are found to be necessary for project purposes, then those lands must be included in the project boundary. As discussed in section 3.3.8.2, we find that improving the five above campgrounds, Baker Lake Resort, along with developing approximately 6 miles of new trails, could enhance the recreational resources and help meet a need for a variety of recreational experiences and activities. Also, improving these sites could potentially alleviate over-crowding at other recreation sites. We estimate these facilities would add an estimated 281 acres of federal land to the project boundary, which would increase Puget's annual costs by an estimated \$15,800. Including the roads necessary to provide access to these facilities would add another 115 acres and another \$6,500 in annual costs. Our total estimated additional acres and costs would be 396 acres and \$22,300.⁴⁸ Regarding the trails, we recommend Puget locate the new trails with the goal to expand upon existing and proposed project recreation sites at or near the project. Signage at these recreation sites should identify the sites as part of the project.

We do not, however, recommend making the entire Baker River Trail a project facility because it provides access primarily to the North Cascades National Park, which is north of Baker Lake. We do recommend, however, including an approximate 1-mile-long section of this trail, from the Baker River South Trailhead to the Baker River North Trailhead (where the Baker River and Baker Lake trails meet). Our recommendation to include this short section would create a continuous loop around Baker Lake for hiking.

We recommend the measures (except for the funding provision and Forest Service standards referenced in the proposed articles) contained in Proposed Articles 303, 309, 310, 312, 313 and 314 be included in any license (we recommend Puget implement these measures not just provide funds to the Forest Service). Puget should prepare an Upper Baker Developed Recreation Plan that addresses the redevelopment (as necessary), operation, and maintenance of, the above-mentioned five campgrounds, trails, and the Baker Lake Resort at Baker Lake (except the Upper Baker VIS and Interpretive Services

⁴⁸ This estimate assumes that the following roads would be needed to access between 3 and 6 dispersed recreation sites and would be included in the project boundary as project facilities: FR 1122 and FR 1136.

that we recommend as a separate plan). We have modified section 3.3.8.2 and section 5.1 to show these changes.

We do not recommend Puget consult with the Forest Service to establish the actual level of funding required to accomplish rehabilitation, operation, and maintenance of the above campgrounds as estimated in the Recreation Implementation Schedule attached as Appendix A-5 in the Settlement Agreement. We also do not recommend Puget provide operation and maintenance to the Forest Service in fixed amounts and to adjust those amounts based on Puget's average costs for various 5 year periods. Finally, we do not recommend Puget be required to enter into a reimbursable maintenance agreement with the Forest Service that sets forth how Puget funds and receives credit for maintenance including credits for fees collected by the Forest Service. Instead we recommend Puget operate and maintain the above facilities. Puget and the Forest Service may enter into an off-license agreement for the above purposes, but Puget has the ultimate responsibility for redeveloping (as necessary), operating, and maintaining the campgrounds, trails, and the Baker Lake Resort in accordance with staff's recommended standards.

At an estimated cost of \$309,400 annually, we recommend that Puget develop and implement an Upper Baker Developed Recreation Plan. We find the benefits of an Upper Baker Developed Recreation Plan would justify the cost.

Lower Baker Developed Recreation

Proposed Article 305 would require Puget to prepare a Lower Baker Developed Recreation Plan including acquisition of land for a Lake Shannon access site. The action would entail identifying an additional access area suitable for the construction of a concrete boat launch, parking area, and day-use area, that has an existing access road. Puget would be allowed to construct this facility at an alternative, off-site location should Puget be unable to acquire a suitable and cost-effective access site on Lake Shannon.

Although a gravel boat launch exists at Lake Shannon and provides access to 0.1-mile of shoreline, public road access to the site is limited due to land ownership.

In our public meetings for the draft EIS, Puget indicated that Skagit County is acquiring all rights necessary to convert the mostly private road accessing the above recreation sites into a county road which would ensure permanent access for recreationists.

Given that the access road to the proposed Lake Shannon recreation site would be a county road, we do not recommend including the option of Puget constructing the Lake Shannon recreation site at an alternative, off-site location. Puget should include in its plan an explanation of the road access situation. We have modified section 3.3.8.2 and section 5.1 in order to reflect this new information.

At an estimated cost of \$67,300 annually, we recommend that Puget develop and implement a Lower Baker Developed Recreation Plan for the project.

Upper Baker Visitor Information Services

Proposed Article 306 would require Puget to provide funds to the Forest Service for: (1) constructing and operating an Upper Baker Visitor Information Station (VIS) with parking, information kiosks, and sanitation facilities at Baker Lake, (2) Forest Service staff for visitor information services at Baker Lake from Memorial Day through Labor Day, and (3) Forest Service staff at its VIS in Sedro-Woolley, Washington from Memorial Day through Labor Day.

Proposed Article 307 would require Puget to provide funds to the Forest Service for the planning, staffing, and production of materials to provide interpretive services in the project area, with an emphasis on Baker Lake. These funds would also be used by the Forest Service to prepare a comprehensive Interpretation and Education Plan to facilitate the above interpretive services.

As discussed in section 3.3.8.2, a need exists for interpretive services at the Baker River Project, which could be met through an Interpretation and Education Plan. Rather than Puget providing funds to the Forest Service as stipulated by Proposed Articles 306 and 307, we recommend Puget develop and implement an Interpretation and Education Plan for the project. The plan should include provisions for the following: (1) constructing and operating the VIS at Baker Lake on lands within the project boundary; (2) staffing the VIS from Memorial Day through Labor Day; (3) providing information about the project, such as local culture and history, environmental resources, and recreational opportunities; (4) describing how the needs of the disabled are considered in the design of the VIS; and (5) providing operation and maintenance costs. The plan could be developed in concert with the interpretive component of the staff-recommended final HPMP.

Forest Service staffing at its VIS in Sedro-Woolley, Washington is unrelated to the project. We do not find a nexus between this VIS and the project because the VIS is located approximately 30 miles to the west of the project; thus, it would not fill any demonstrated project need. We do not consider Proposed Article 307 (provisions to provide funds to the Forest Service) in our comprehensive development determination for the project.

However, we do recommend, at an estimated cost of \$27,500 annually, that Puget develop and implement an Interpretation and Education Plan for the Baker River Project.

Dispersed Recreation Management

Proposed Article 308 would require Puget to provide funds to the Forest Service to develop and implement a Dispersed Recreation Management Plan. The plan would provide for hardening three to six high priority sites identified in exhibit R-2 of the Dispersed Site Inventory Study (Study R-12).

While we recognize dispersed recreation is an opportunity afforded by the Mt. Baker-Snoqualmie National Forest, including in the project vicinity, demand for dispersed recreation is projected to slightly increase; thus, there is a need to manage dispersed recreation. Rather than Puget providing funds to the Forest Service, we recommend that Puget develop and implement a Dispersed Recreation Management Plan for three to six dispersed sites that would include hardening of the sites. Given the nexus between the project and recreational use at the dispersed recreation sites as discussed in section 3.3.8.2, Puget's management of three to six dispersed sites would protect environmental resources. These dispersed sites to be improved and maintained, therefore, should be brought into the Baker River Project boundary and made project facilities.

At an estimated cost of \$39,000 annually, we recommend Puget develop and implement a Dispersed Recreation Management Plan.

Lower Baker Trails

Proposed Article 311 would require Puget to develop a Lower Baker Trail Plan and construct up to two miles of trails in the vicinity of the Town of Concrete. Proposed Article 315 would require Puget to maintain these trails once constructed.

We recommend the above measures be combined into one plan that addresses both the construction and maintenance of the trails. Trails could expand upon existing or proposed project recreation facilities, including our recommended recreation site on Lake Shannon, to the extent possible. The potential trail route should take into consideration potential effects on sensitive habitats, such as grizzly bear habitat, wetlands, ancient forests and areas with species of special concern. We note that if measures on non-project lands are found to be necessary for the project purposes, then those lands must be included in the project boundary.

At an estimated cost of \$7,500 annually, we recommend Puget develop and implement a Lower Baker Trail Plan.

Forest Service Road Maintenance

Proposed Article 316 would require Puget to provide funds to the Forest Service for routine maintenance of portions of up to 25 miles of Forest Service roads in the project vicinity. The Forest Service roads include FR 11 (Baker Lake Highway); FR 1106 (Depression Lake); FR 1107 (Anderson Road); FR 1118 (Horseshoe Cove and Bayview); FR 1122 (Lower Sandy Creek); FR 1136 (Lower Boulder Creek); FR 1137 (Panorama Point); FR 1142 (Baker Lake Resort); FR 1150 (Shannon Creek campground); and FR 1168 (Baker River Trailhead North).

Proposed Article 316 would also require Puget to provide funds to the Forest Service for paving FR 1106.

Proposed Article 317 would require Puget to continue to provide public access to the east side of Baker Lake using FR 1106 across Upper Baker dam, except as may be restricted by short-term public safety or project security requirements.

Based on supporting information filed June 16, 2006, by the Forest Service and Puget's June 15, 2006, filing in which Puget states its personnel utilize the roads for operations and maintenance responsibilities, we find a nexus exists between the Baker River Project and the 10 roads identified under Proposed Article 316 - see section 3.3.8.2. We find that the roads are needed for project purposes; therefore, the roads should be brought into the Baker River Project boundary.

The approximate 1-mile-long FR 1106 is located within the existing Baker River Project boundary and is used to service the project's Kulshan Campground and West Pass Dike recreation facility. Upgrading and maintaining this road as identified under Proposed Article 316 would provide for continued and improved public access to Baker Lake. We find FR 1106 necessary to support recreation at, and provide access to, the project. Therefore, Puget should provide project-related road upgrades and maintenance on FR 1106.

We find that Puget should develop and implement a Roads Maintenance Plan for the Baker River Project. Implementing this measure, as appropriate, would cost an estimated \$41,500.

Water Quality

Proposed Article 401 would require Puget to comply with the terms and conditions of any WQC and with certain water quality criteria for temperature, dissolved oxygen, total dissolved gas, and turbidity. However, Proposed Article 401 does not specify actual water quality criteria for temperature, dissolved oxygen, and total dissolved gas. Instead, it states that the "natural condition" for temperature and dissolved oxygen would be

developed within 5 years of any license and that a site-specific standard may be needed for total dissolved gas. Further, it indicates that the above criteria are general and preliminary in that they would be modified by any future WQC.

Because the above water quality criteria have not been defined, are general and preliminary, and would be modified by any WQC issued for the project, we do not include these criteria in our recommended measures for water quality.

Terrestrial Resources Management Report

Proposed Article 501 would require Puget to develop a Terrestrial Resource Management Plan that would include the substantive planning and implementation requirements contained in Proposed Articles 502-504 and 506-514; provisions for monitoring and filing annual reports with the Commission; provisions for periodically reviewing the plan and; a summary of expenditures, earned interest, disbursements, adjustments for inflation, and other accounting information.

We recommend this measure to the extent that it consolidates the monitoring results of other terrestrial resource measures into one annual monitoring report. We do not recommend this measure include the “planning and implementation requirements” or substantive provisions of other proposed license articles. Further, we see no need for a “plan” or for provisions to periodically review a plan in order to file annual monitoring reports. Puget may simply file its annual monitoring report according to its schedule in the proposed article.

Deciduous Forest Habitat

Deciduous forest habitat is in short supply in the Baker River basin and surrounding areas. Deciduous forest stands along riparian zones can provide locally unique wildlife habitat when certain structural features are present. Locally unique features can include variation and patchiness of understory vegetation, snags, and downed logs, seasonal canopy cover, and stream shading. Deciduous forest habitats are important, productive habitats for migratory birds, including habitats for a number of species that are also declining (i.e., yellow-billed cuckoo and Swainson’s thrush).

About 1 acre of deciduous forest habitat would be cleared to build the new auxiliary powerhouse at the Lower Baker development. Further, several staff-recommended fishery enhancement measures also have the potential to result in disturbance and/or clearing of deciduous forest, including fish propagation facilities, downstream fish passage facilities at both the Upper and Lower Baker developments, and fishway connectivity facilities between Lake Shannon and Baker Lake. In total, these fishery measures are expected to disturb about 19 acres of which a small portion would likely be deciduous forest habitat.

Enhancement of deciduous forest habitat in the project area could be provided by limiting fluctuating water levels in the project reservoirs, which cause shoreline erosion and prevent the establishment and development of deciduous habitats, or by acquiring other deciduous forest habitats outside of the reservoir fluctuation zone in the project area.

Proposed Article 502 would require Puget to acquire and manage deciduous forest habitat having 40 percent or greater deciduous tree composition for the purpose of increasing, protecting, and enhancing habitat for deciduous forest dwelling species, including neotropical birds. Puget does not specify how many acres of deciduous forest it would acquire, where these lands would be located, or what management actions would be taken on these lands once acquired. The Forest Service says Proposed Article 502 would protect and/or enhance about 175 to 218 acres (based on habitat quality) of 225 acres that are precluded from developing by reservoir fluctuations in Baker Lake and that would be removed by new project construction. Given that several hundred acres of vegetation are affected by reservoir fluctuations, that there are anticipated losses of deciduous forest from new project construction, and that deciduous forest habitat in the project area is limited, we recommend Puget acquire and/or enhance deciduous forest habitat generally in conformance with Proposed Article 502. Implementing this measure would cost an estimated \$25,900 annually.

We recommend Puget develop and file for Commission approval a Deciduous Forest Habitat Plan for acquiring and/or enhancing deciduous forest habitat with at least 40 percent deciduous tree composition. The plan should include the number of acres of habitat to be acquired and/or enhanced and a schedule for acquiring these lands. Lands should be acquired as close to the project as possible to ensure that wildlife resources in the project area would benefit from this measure. The plan should also identify any management actions to be taken on these lands and the location of any proposed acquired parcels of non-project lands relative to project boundaries. We recommend including any non-project lands in the project boundary.

Elk Habitat

Proposed Article 503 would require Puget to acquire elk foraging habitat in the Baker River basin or other areas of Washington State occupied by the Nooksack Elk Herd. Puget proposes this measure to mitigate for project-related recreation disturbance to elk on project lands and lands adjacent to Baker Lake and Lake Shannon. Puget also says lake level fluctuations in Baker Lake and Lake Shannon preclude the development of elk foraging habitat along project shorelines. Implementing this measure would cost an estimated \$287,900 annually.

In its studies, Puget identified elk winter foraging habitat, rated from good to poor, on project and adjacent non-project lands to the west of Baker Lake and Lake Shannon. Located on these lands, particularly adjacent to Baker Lake, are various project and non-project recreation facilities that are regularly used by recreationists, especially during the summer. Recreational use at these project and non-project recreational facilities disturbs elk in the vicinity of the project, displacing elk from foraging habitat. Lake level fluctuations in project reservoirs also preclude the development of elk foraging habitat. Moreover, new construction would require clearing some vegetation at the project which may currently provide habitat for elk.

Elk using project and adjacent non-project lands in the Baker River basin are part of the Nooksack Elk Herd which provides important recreational, aesthetic, and spiritual values to the residents of northwestern Washington. The Nooksack Elk Herd is the smallest herd in Washington and has decreased in size over the past 15 years.

We recommend Puget provide elk foraging habitat consistent with Proposed Article 503 with some modifications. Puget should first assess the feasibility of creating cultivated pastures or making other elk foraging habitat improvements on project lands, and should consider acquiring foraging habitat and making improvements on non-project lands as close to the project as possible. According to Puget's Elk Habitat Mapping Study (T-21), ample land rated as poor or marginal elk foraging habitat exists between the western shore of the project's reservoirs and the Baker Lake highway. We recognize that much of this habitat would still be subject to project and non-project recreation disturbance but may nevertheless be suitable for elk foraging depending on the accuracy of Puget's disturbance buffers contained in this study. Other habitat enhancement opportunities also exist between the Baker Lake highway and Mount Baker which are still relatively close to the project.

We recommend Puget develop an Elk Habitat Plan with the above modifications. This plan should identify the number of acres to be acquired and managed, any management action to be taken on these lands, and the location of any proposed acquired parcels of non-project lands relative to project boundaries. Any non-project lands should be included in the project boundary.

Wetland Habitat

Proposed Article 504 would require Puget to acquire wetlands and to conserve wetland-dependent species including native amphibians. Puget proposes this measure to mitigate the effects of fluctuating water levels on wetlands adjacent to Baker Lake and Lake Shannon and the effects to amphibians that use these habitats. Implementing this measure would cost an estimated \$29,900 annually.

We recommend Puget enhance or acquire wetlands consistent with Proposed Article 504 with some modifications. Puget should first assess the feasibility of enhancing wetlands adjacent to Baker Lake or Lake Shannon or otherwise within current project boundaries. Other habitat enhancement and acquisition opportunities may exist in the Baker River basin or just downstream adjacent to the Skagit River, close to the project. We do not recommend Puget enhance habitat or acquire lands in accordance with the geographic preferences referenced in this measure because it appears opportunities exist closer to the project to accomplish this measure. Also, Puget has not identified how many acres of wetlands would be acquired or what management actions would be taken on those lands, once acquired. We recommend Puget prepare a Wetland Habitat Plan that provides this information and identifies where it would enhance or acquire proposed parcels of land. Any non-project lands should be included in the project boundary.

Floating Loon Nest Platforms

Fluctuating water levels prevent common loons from successfully nesting adjacent to Baker Lake and Lake Shannon. Proposed Article 507 would require Puget to install floating nest platforms on project reservoirs as mitigation for these effects. Implementing this measure would cost an estimated \$5,000 annually.

We recommend Puget install floating nest platforms for common loons substantially in conformance with Proposed Article 507. However, this proposed article would allow Puget to provide funds to an unspecified third party for one common loon nesting platform on a non-project reservoir in lieu of one nesting platform on Baker Lake or Lake Shannon. We do not recommend installing a nesting platform on a non-project reservoir because opportunities exist on project reservoirs for these platforms.

Noxious Weeds, Special Status Plants, and *Carex flava*

Proposed Articles 508, 509, and 510 would require Puget to control noxious weeds, manage special status plants, and manage *Carex flava* (yellow sedge), respectively, on lands adjacent to Baker Lake and Lake Shannon. Project lands that would be managed pursuant to the above three articles are identified in Puget's relicensing studies and in Appendix A-2 in the license application. Implementing these measures would cost an estimated \$55,200 annually.

We recommend that Puget manage the above species but note that some of the identified lands to be managed extend beyond project boundaries. We recommend Puget include in the project boundary any lands it would manage for noxious weeds, special status plants, and *Carex flava* adjacent to Baker Lake and Lake Shannon. In addition, Appendix A-4 referenced in Proposed Article 510 refers to an off-site seed and/or plant collection program to reestablish *Carex flava* populations if necessary. We recommend

any such program, if needed, be established on-site and within project boundaries. Finally, we recommend Puget develop a separate plan for each of the above proposed measures.

Late Seral Forest

Proposed Article 515 would require Puget to provide funding to the Forest Service for its actual cost in thinning trees on 321 acres of second-growth forest on Forest Service lands within the Baker River basin. Current project operation has minor effects on existing late seral forest habitats through the influence of fluctuating reservoir water levels. Erosion occurs along portions of the reservoir shorelines under current conditions and can result in disturbance and loss of shoreline vegetation. In addition, Puget says the habitat edge created along the interface of reservoir shorelines and late seral forest may increase the risk of predation for mature and old-growth dependent species such as marbled murrelet and northern spotted owl by hawks, owls and corvids. Implementing this measure would cost an estimated \$4,900 annually.

Although Puget's studies indicate that shoreline erosion is occurring along 15.3 miles of Baker Lake and 20.5 miles of Lake Shannon, no information exists to indicate that this erosion is reducing the amount of late seral forest habitat adjacent to project reservoirs. In addition, the edge effects created by project reservoirs have been in place since the project's original construction.

Nevertheless, we recommend the above measure because of new construction at the project. New construction would require clearing some vegetation at the Sulphur Creek site and at other locations for various fishery enhancements measures. Further, loud noise associated with heavy equipment and pile drivers could disturb both species which may nest adjacent to these sites. Even though the above effects would be minor and temporary, both the marbled murrelet and northern spotted owl are federally listed threatened species and the proposed measure would enhance habitat for these species and promote their recovery.

We recommend Puget prepare a Late Seral Habitat Enhancement Plan to thin trees on 321 acres of second-growth forest to enhance habitat for marbled murrelets and northern spotted owls. Puget should be responsible for ensuring that this work is completed, not just responsible for providing funds to the Forest Service. Puget may contract with the Forest Service or any other third party to perform this work. We recommend Puget first assess thinning trees on lands within the project boundary. If suitable lands do not exist, we recommend Puget thin trees on lands as close to the project as possible. Our recommended Late Seral Forest Enhancement Plan should identify the location of any proposed parcels of non-project lands for enhancement, relative to project boundaries. We do not, however, recommend these lands be included

in the project boundary because this measure would be a one-time action that would provide long-term benefits to both species.

Mountain Goats

Proposed Article 516 would require Puget to provide funding to the Forest Service for its actual costs in making habitat improvements on 194 acres of mountain hemlock forest on Forest Service lands in or adjacent to the Baker River basin. Mountain goats are an important native game species in Washington, a WDFW priority species, and a Forest Service management indicator species. As discussed in section 3.3.5.2, the Forest Service says goats consistently winter near the northwest end of Baker Lake and have been seen near Baker Lake's southwest shore. WDFW says goats frequently use lower elevations at the project. Both agencies say goats are present on, or immediately adjacent to, project lands. Goats that use project and nearby non-project lands adjacent to Baker Lake would be subject to considerable disturbance from recreationists at staff-recommended recreation sites. Implementing this measure would cost an estimated \$4,300 annually.

We recommend Puget prepare a Mountain Goat Habitat Enhancement Plan to improve foraging habitat for goats on 194 acres of land. Puget should be responsible for ensuring that this work is completed, not just responsible for providing funds to the Forest Service. Because opportunities at the project are limited to enhance this type of habitat, we recommend Puget be required to make habitat improvements as close to the project as possible. Our recommended Mountain Goat Enhancement Plan should identify the location of any proposed parcels of non-project lands for enhancement, relative to project boundaries. We anticipate Puget performing ongoing maintenance to maintain this habitat as suitable for goats for the term of any license. Therefore, any non-project lands should be included in the project boundary.

Grizzly Bears

Proposed Article 517 would require Puget to provide funding to the Forest Service for its actual costs to implement a road closure program on Forest Service lands within the North Cascade Grizzly Bear Recovery Area. The grizzly bear is listed as a threatened species under the ESA. Puget proposes this measure to mitigate for project-related recreation disturbance to grizzly bears. Closing roads would reduce human disturbance and enable bears to use more spring and early summer foraging habitat. Implementing this measure would cost an estimated \$6,900 annually.

Project-related recreation, operation, and maintenance activities limit grizzly bear use of available habitats at the project. Little can be done on project lands to enhance grizzly bear habitat due to current and projected levels of recreation. A road closure program that would enhance non-project lands would increase grizzly bear foraging

habitat in the general vicinity and would be consistent with and would help achieve agency recovery goals for this listed species.

We recommend Puget prepare a Grizzly Bear Road Closure Plan to close roads in the North Cascades Grizzly Bear Recovery Area of the Mt. Baker-Snoqualmie National Forest to reduce human use and disturbance and to increase the effectiveness of spring and early summer grizzly bear foraging habitat. Puget should be responsible for ensuring that this work is completed, not just responsible for providing funds to the Forest Service. Puget may contract with the Forest Service or any other third party to perform this work. Because opportunities to enhance this type of habitat are limited at the project, we recommend Puget be permitted to close roads on non-project lands but these roads and enhanced lands should be as close to the project as possible. Our recommended Grizzly Bear Road Closure Plan should identify the location of any gates or other devices to close roads and the location of the roads to be closed relative to project boundaries.

5.1.4 Proposed Measures Not Recommended by Staff

We do not recommend the following proposed measures in the Settlement Agreement because they do not exhibit sufficient nexus to project resources or effects, would not result in benefits to non-power resources that would be worth their cost or would not contribute to the best comprehensive use of the basin.

Baker Reservoir Recreation Water Safety

Proposed Article 304 would require Puget to develop a Baker Reservoir Recreation Water Safety Plan. Under the plan, Puget would: (1) provide funds to the Forest Service to install 8 to 12 bulletin boards at unspecified locations; (2) provide displays and tear-sheet maps at: (a) the Forest Service office in Sedro-Woolley; (b) all developed lake-shore campgrounds at Baker Lake; (c) the West Pass Dike public boat launch; (d) Puget's Concrete Visitor Information Center, if the facility is being operated; and (e) two to four unidentified boat-in access points; (3) install log booms and buoys to define swim areas at Horseshoe Cove and Baker Lake Resort and possibly other sites; and (4) provide funds to the Forest Service for implementing the plan. We estimate implementing this measure would cost \$19,200 annually.

As required under the Commission's regulations, Puget has developed and implements a public safety plan for the Baker River Project. This plan is reviewed regularly by the Commission staff. As previously discussed Puget should be responsible for ensuring project-related measures are implemented, not just responsible for providing funds to the Forest Service.

As previously discussed, we do not find a project nexus with the Forest Service office in Sedro-Woolley. Generally, we find Proposed Article 304 either lacks specificity

(e.g., two to four selected boat-in access points that are undefined) or is broad in its intent (e.g., all developed lake-shore campgrounds at Baker Lake). We note Proposed Articles 306 and 307 would require Puget to develop and implement an Upper Baker Visitor Information Services station that would provide information about the project, including project-related public safety. Therefore, the bulletin boards, displays, and tear-sheet maps under Proposed Article 304 are unnecessary.

Puget's existing public safety plan provides for log booms, signs, and other measures to protect the public at the project. Because we now recommend including Horseshoe Cove Campground and Baker Lake Resort into the project boundary, Puget should, in consultation with the Commission's Portland Regional Office and the Forest Service, modify its public safety plan, under Part 12.42 of the Commission's regulations, to address public safety at the Horseshoe Cove Campground swimming area and Baker Lake Resort swimming area. Further, the staff-recommended final Upper Baker Developed Recreation Plan would contain a provision to take into account public safety at the project and modify the existing public safety plan in order to include such measures.

In light of our findings, we conclude that there is no need for a separate Baker Reservoir Recreation Water Safety Plan.

Law Enforcement

Proposed Article 318 would require Puget to coordinate and fund the development of a Law Enforcement Plan for law enforcement personnel with jurisdiction in the project area and the river basin. The intent of the plan is to address law enforcement presence and public contact, emergency communications and response procedures, public safety and security, and protection measures for facilities and resources within the project area and the river basin. Implementing this measure would cost an estimated \$100,000 annually.

While enforcement of the requirements of any license would be Puget's responsibility, enforcement of local laws within the project area and the river basin is not a matter of Commission jurisdiction but is the responsibility of local law enforcement agencies. Therefore, we do not recommend including this measure in any license issued for the project.

Aquatic Riparian Habitat Protection, Restoration and Enhancement

Proposed Article 505 would require Puget to develop an Aquatic Riparian Habitat Protection, Restoration and Enhancement Plan to acquire, protect and enhance low-elevation bottomland ecosystems in the Skagit River basin focusing on habitat for

anadromous salmonids, other aquatic species and riparian-dependent birds and amphibians. Implementing this plan would cost an estimated \$369,600 annually.

Puget proposes this measure for multiple reasons, including: (1) to protect and enhance low-elevation bottomland ecosystems including backwater sloughs and other off-channel habitats supporting juvenile Chinook rearing; (2) to protect, mitigate any damage to, and enhance Skagit River riparian habitats that may be affected by modifications of project releases under the Proposed Action; (3) to enhance conditions in the project area and to substantially exceed any negative effects of fluctuating water levels on within-reservoir amphibian breeding habitats; (4) to acquire and enhance substantial acreage of bottomland habitats, including riparian forest; (5) to offset some of the unavoidable effects of the Proposed Action on bull trout habitat in the middle Skagit River; (6) to benefit the Oregon spotted frog if present, or reintroduced, to the Skagit River basin; (7) to acquire a substantial amount of habitat, including low elevation riparian forest habitat, used by bald eagles for perching and foraging; and (8) to provide habitat for bald eagle foraging and perching.

Our analysis indicates that fluctuating water levels in Baker Lake and Lake Shannon affect shoreline wetlands and wetland-dependent amphibians. In addition, fluctuating flows from the Lower Baker powerhouse affect anadromous salmonids in the Baker and Skagit Rivers. The impacts in the Skagit River decrease with distance downstream of the Baker River confluence (RM 56.5), and the interactive effects of both the Skagit River and Baker River Projects are largely attenuated near Mt. Vernon at RM 15.7. The measures in Proposed Article 505 are to be implemented within the low-elevation habitats of the Skagit River basin, which includes the Baker River and middle Skagit River basins – areas most affected by the Baker River.

The plan does not include enough detail to allow staff to assess the potential benefits of the specific measures that would be implemented by the plan, or the nexus of these measures to project impacts. We also note the high cost of the proposed Aquatic Riparian Habitat Protection, Restoration and Enhancement Plan (\$369,600 annually). Moreover, we already recommend other enhancements for Chinook salmon, bull trout, amphibians and bald eagles in our recommended measures for upstream and downstream fish passage; increased minimum flows and ramping rates; fish passage between Baker Lake and Lake Shannon; more stable water levels in these two reservoirs; wetland enhancements; and bald eagle management as discussed. For these reasons, we are not recommending implementation of Proposed Article 505.

Contingency Funds

Puget proposes to establish the TERF, RAM, HERC and CREF funds under Proposed Article 602 primarily to mitigate unforeseen impacts not otherwise addressed in other proposed license articles. Funds may also be used to implement “alternative

strategies” for resource protection, mitigation, and enhancement identified via adaptive management.

Each of the above funds would be used for actions to enhance, conserve, acquire and/or restore habitat for either terrestrial or aquatic species, cultural or recreation resources. Puget provides a few examples of how the above funds may be used, but does not provide specific measures to be implemented using the funds.

There is uncertainty as to whether the TERF, RAM, HERC and CREF funds would be needed or how the funds would be used; therefore, we are not able to evaluate the merits of specific measures or the nexus with project effects and we do not recommend including this measure in any license issued for the project. We are already recommending a comprehensive set of measures designed to protect, mitigate and enhance environmental resources at the project. Should unanticipated impacts occur in the future, the Commission could reopen the license for the purpose of considering additional measures.

Adaptive Management

Proposed Article 603 would require Puget to use adaptive management in its implementation of all other proposed articles in the Settlement Agreement. Puget would be required to use “alternative strategies” when developing objectives, criteria and when using funds and would be required to use a “plan amendment process” when changed circumstances warrant.

The provisions in this article are too vague to be enforceable; they lack specificity regarding the implementation of individual measures. Consequently, we do not recommend including this measure in any license issued for the project.

5.2 FISH AND WILDLIFE AGENCY RECOMMENDATIONS

Under provisions of the FPA, each hydroelectric license issued by the Commission shall include conditions based on recommendations provided by federal and state fish and wildlife agencies for the protection, mitigation, and enhancement of fish and wildlife resources affected by the project.

Section 10(j) of the FPA states that whenever the Commission believes that any fish and wildlife agency recommendation is inconsistent with the purposes and the requirements of the FPA or other applicable law, the Commission and the agency shall attempt to resolve any such inconsistency, giving due weight to the recommendations, expertise, and statutory responsibilities of such agency.

On March 16, 2005, NMFS filed Section 10(j) recommendations for the project. FWS⁴⁹ and WDFW filed section 10(j) recommendations on March 21, 2005. We have preliminarily determined that one recommendation that is within the scope of section 10(j) may be inconsistent with the purposes and requirements of the FPA.

FWS and WDFW recommend Puget develop an Aquatic Riparian Habitat Protection, Restoration, and Enhancement Plan (Proposed Article 505). This measure would require Puget to acquire, protect, and enhance low-elevation bottomland ecosystems in the Skagit River basin focusing on habitat for anadromous salmonids, other aquatic species, and riparian-dependent birds and amphibians. However, as discussed in section 5.1.4 of the final EIS, the plan does not include enough detail to allow staff to assess the potential benefits of the specific measures that would be implemented by the plan, or the nexus of these measures to project effects. We also note the high cost of the proposed Aquatic Riparian Habitat Protection, Restoration, and Enhancement Plan (\$369,600 annually). Based on this information, we find that this recommendation may be inconsistent with the comprehensive planning standard of section 10(a) and the equal consideration provision of section 4(e) of the FPA, and therefore, we do not recommend this measure. We do recommend, however, improved upstream and downstream fish passage facilities (Proposed Articles 103 and 105); new minimum flows and ramping rates (Proposed Article 106); gravel and large woody debris augmentation (Proposed Articles 108 and 109); a shoreline erosion control plan (Proposed Article 110); a wetland habitat plan (Proposed Article 504); and a bald eagle management plan (Proposed Article 513), which would provide enhancement to similar resources targeted by the Aquatic Riparian Habitat Protection, Restoration, and Enhancement Plan.

On June 1, 2006, we participated in a section 10(j) meeting via teleconference with WDFW and FWS to discuss and attempt to resolve staff's preliminary determination of inconsistency with the Aquatic Riparian Habitat Protection, Restoration, and Enhancement Plan. We were unable to resolve our inconsistency with the agencies' recommendation in this meeting. Our discussion is documented in staff's meeting summary issued June 8, 2006.

Additionally, we do not recommend three measures that we have found to be outside the scope of section 10(j) because they are not specific measures to protect fish and wildlife: (1) law enforcement (Proposed Article 318), (2) various contingency funds (Proposed Article 602), and (3) certain adaptive management provisions (Proposed Article 603).

By letters filed March 21, 2005, the Sauk-Suiattle Indian Tribe and the Swinomish Indian Tribal Community made two recommendations pursuant to sections 10(j) and

⁴⁹ Interior filed these recommendations on behalf of FWS.

10(a) of the FPA. The tribes recommend: (1) adopting the Settlement Agreement without material modification, and (2) issuance of a license before the current license expires on April 30, 2006. We consider the tribes' recommendations under section 10(a) but not under section 10(j), because the tribes are not fish and wildlife agencies within the meaning of 18 CFR §4.30(b)(9)(i) of our regulations.

Table 5-1 summarizes federal and state recommendations, our conclusions on whether or not the recommendations are within the scope of section 10(j), and whether or not we adopt the recommendations. Recommendations we consider to be outside the scope of Section 10(j) have been considered under Section 10(a) of the FPA and are addressed in the appropriate resource sections.

Table 5-1. Fish and wildlife agency recommendations. (Source: Staff)

Proposed Article	Recommendation	Agency	Within the scope of 10(j)?	Total Levelized Annual Cost (2006\$)	Recommend adopting?
101	Develop a Fish Propagation Facilities Plan	NMFS, FWS, WDFW	Yes	974,000	Yes
102	Annual Report for Aquatic Measures	FWS, WDFW	No, not a specific measure to protect fish and wildlife.	13,400	Yes
103	Develop an Upstream Fish Passage Implementation Plan	FWS, WDFW	Yes	623,300	Yes
104	Develop a Fish Connectivity Plan	WDFW	Yes	105,500	Yes

Proposed Article	Recommendation	Agency	Within the scope of 10(j)?	Total Levelized Annual Cost (2006\$)	Recommend adopting?
105	Develop a Downstream Fish Passage Implementation Plan	FWS, WDFW	Yes	3,488,600	Yes
106	Develop a Flow Implementation Plan	NMFS, FWS, WDFW	Yes	2,423,200	Yes
107	Flood Storage Operation	WDFW	No, not a specific measure to protect fish and wildlife.	None	Yes
108	Develop a Gravel Management Plan	NMFS, FWS, WDFW	Yes	11,000	Yes
109	Develop a Large Woody Debris Management Plan	NMFS, FWS, WDFW	Yes	23,500	Yes
110	Develop a Shoreline Erosion Control Plan	FWS, WDFW	Yes	28,600	Yes
305	Develop a Lower Baker Developed Recreation Plan	WDFW	No, not a specific measure to protect fish and wildlife.	67,300	Yes

Proposed Article	Recommendation	Agency	Within the scope of 10(j)?	Total Levelized Annual Cost (2006\$)	Recommend adopting?
318	Develop a Law Enforcement Plan	WDFW	No, not a specific measure to protect fish and wildlife.	100,000	No
401	Water Quality Monitoring and Protection Plan	NMFS, FWS, WDFW	Yes	36,500	Yes
501	Develop a Terrestrial Resource Management Plan	FWS, WDFW	No, not a specific measure to protect fish and wildlife.	6,700	Yes
502	Acquire and Manage Deciduous Forest Habitat	FWS, WDFW	Yes	25,900	Yes
503	Acquire Elk Foraging Habitat	FWS, WDFW	Yes	287,900	Yes
504	Acquire Wetland Habitat	FWS, WDFW	Yes	29,900	Yes
505	Develop an Aquatic Riparian Habitat Protection, Restoration and Enhancement Plan	FWS, WDFW	Yes	369,600	No

Proposed Article	Recommendation	Agency	Within the scope of 10(j)?	Total Levelized Annual Cost (2006\$)	Recommend adopting?
506	Osprey Nest Structures	FWS, WDFW	Yes	2,100	Yes
507	Loon Floating Nest Platforms	FWS, WDFW	Yes	5,000	Yes
508	Manage Noxious Weeds	FWS, WDFW	Yes	22,700	Yes
509	Manage Special Status Plants	FWS	No, not a specific measure to protect fish and wildlife.	17,500	Yes
511	Manage Decaying and Legacy Wood	FWS, WDFW	Yes	13,400	Yes
512	Bald Eagle Night Roost Surveys	FWS, WDFW	Yes	2,300	Yes
513	Develop a Bald Eagle Management Plan	FWS, WDFW	Yes	700	Yes
514	Use Habitat Evaluation Procedures	FWS, WDFW	Yes	8,600	Yes

Proposed Article	Recommendation	Agency	Within the scope of 10(j)?	Total Levelized Annual Cost (2006\$)	Recommend adopting?
515	Funding for Late Seral Forest Growth	WDFW	No, funding is not a specific measure to protect fish and wildlife.	4,900	Yes for measure but funding not adopted.
516	Funding for Mountain Goat Habitat	WDFW	No, funding is not a specific measure to protect fish and wildlife.	4,300	Yes for measure but funding not adopted.
517	Funding for Grizzly Bear Road Management	WDFW	No, funding is not a specific measure to protect fish and wildlife.	6,900	Yes for measure but funding not adopted
601	Baker River Coordinating Committee	NMFS, FWS, WDFW	No, not a specific measure to protect fish and wildlife.	50,000	Yes

Proposed Article	Recommendation	Agency	Within the scope of 10(j)?	Total Levelized Annual Cost (2006\$)	Recommend adopting?
602	Funding for TERF, RAM, HERC, and CREF funds	FWS, WDFW	No, funding is not a specific measure to protect fish and wildlife.	96,100	No
603	Adaptive Management	FWS, WDFW	No, not a specific measure to protect fish and wildlife.	3,500	No
N/A	Flow Continuation Valve	NMFS, WDFW	Yes	101,000	Yes
N/A	Inspections, Records and Notification	NMFS, WDFW	No, not a specific measure to protect fish and wildlife.	None	Yes

5.3 CONSISTENCY WITH COMPREHENSIVE PLANS

Section 10(a)(2) of the FPA, 16 U.S.C. section 803(a)(2)(A), 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 a project. Under section 10(a)(2)(A) of the FPA, federal and state agencies filed 75 comprehensive plans that address various resources in Washington. We determined that 24 comprehensive plans are relevant to the Baker River Project (table 5-1). We found no inconsistencies.

Table 5-2. Comprehensive Plans relevant to the Baker River Project.

Comprehensive Plan	Agency
General management plan: North Cascades National Park, Ross Lake National Recreation Area, and Lake Chelan National Recreation Area. June 29, 1988.	National Park Service, Sedro Woolley, Washington
The fifth northwest electric power and conservation plan. Council Document 2005-07.	Northwest Power and Conservation Council, Portland, Oregon.
Protected areas amendments and response to comments. Council Document 88-22.	Northwest Power and Conservation Council, Portland, Oregon
Eighth amendment to the fishery management plan for commercial and recreational salmon fisheries off the coasts of Washington, Oregon, and California commencing in 1978. January 1978.	Pacific Fishery Management Council, Portland, Oregon
Statute establishing the State scenic river system, Chapter 79.72 RCW. 1977.	State of Washington, Olympia, Washington
Skagit County shoreline management master program. June 29, 1976.	Skagit County Planning Department, Mount Vernon, Washington
Standards and guidelines for management of habitat for late-successional and old-growth forest related species within the range of the northern spotted owl. April 1994.	U.S. Bureau of Land Management. U.S. Forest Service, Washington, DC.
Mt. Baker-Snoqualmie National Forest land and management plan. June 1990.	U.S. Forest Service, Seattle, Washington.
North American waterfowl management plan. May 1986.	U.S. Fish and Wildlife Service. Canadian Wildlife Service
Fisheries USA: The recreational fisheries policy of the U.S. Fish and Wildlife Service. Undated	U.S. Fish and Wildlife Service, Washington, DC
Resource protection planning process (RP3) study unit transportation. August-September 1986.	Washington State Department of Community Development. Office of Archaeology & Historic Preservation, Olympia, Washington
Application of shoreline management to hydroelectric developments. September 1986.	Washington State Department of Ecology, Olympia, Washington

Comprehensive Plan	Agency
State wetlands integration strategy. December 1994.	Washington State Department of Ecology, Olympia, Washington
Hydroelectric project assessment guidelines. 1987.	Washington State Department of Fisheries, Olympia, Washington
Strategies for Washington's wildlife: 1987-1993. May 1987.	Washington State Department of Game, Olympia, Washington
State of Washington natural heritage plan. 1987.	Washington State Department of Natural Resources, Olympia, Washington
Final habitat conservation plan. September 1997.	Washington State Department of Natural Resources, Olympia, Washington
Washington State hydropower development/resource protection plan. December 1992.	Washington State Energy Office, Olympia, Washington
An assessment of outdoor recreation in Washington State: A State Comprehensive Outdoor Recreation Planning (SCORP) Document 2002-2007. October 2002.	Washington State Interagency Committee for Outdoor Recreation, Olympia, Washington
Voices of Washington: Public opinion on outdoor recreation and habitat issues. November 1995.	Washington State Interagency Committee for Outdoor Recreation, Olympia, Washington
State of Washington outdoor recreation and habitat: Assessment and policy plan 1995-2001. November 1995.	Washington State Interagency Committee for Outdoor Recreation, Tumwater, Washington
Washington State trails plan: policy and action document. June 1991.	Washington State Interagency Committee for Outdoor Recreation, Tumwater, Washington
Washington State scenic river assessment. September 1988.	Washington State Parks & Recreation Commission, Olympia, Washington
Scenic rivers program-report. January 1988.	Washington State Parks & Recreation Commission, Olympia, Washington

5.4 RELATIONSHIP OF LICENSE PROCESS TO LAWS AND POLICIES

5.4.1 Water Quality Certification

Pursuant to section 401 of the Clean Water Act and Commission regulations, Puget is required to file as part of its license application a copy of any WQC provided by the State of Washington or proof that such a certificate has been applied for or the requirements waived. On March 8, 2005, Puget submitted an application for a WQC to Ecology as required by section 401 of the Clean Water Act. Puget then withdrew and refilled its WQC application with Ecology by letter dated March 7, 2006. Ecology has one year to issue either a WQC, a waiver, or deny Puget's WQC application.

5.4.2 Coastal Zone Consistency Certification

Section 307(c)(3) of the Coastal Zone Management Act 16 U.S.C. § 1456 (c)(3)(A), requires all federally licensed and permitted activities to be consistent with approved state coastal zone management programs. If a project is located within a coastal zone boundary or if a project affects a resource located in the boundaries of the designated coastal zone, an applicant must certify that the project is consistent with the state's coastal zone management program.

On April 5, 2005, Puget submitted a request for coastal zone consistency determination to Ecology which had 6 months or until October 5, 2005, to act upon Puget's request. However, by letters dated October 4, 2005, February 2, 2006, and June 2, 2006, Puget and Ecology mutually agreed, pursuant to 15 C.F.R. § 930.60 (a)(3), to extend Ecology's time to act on Puget's request until September 1, 2006.

5.4.3 Endangered Species Act

Section 7 of the ESA requires federal agencies to ensure that their actions are not likely to jeopardize the continued existence of endangered or threatened species or cause the destruction or adverse modification of the critical habitat of such species. Our analyses of project effects on these species are presented in section 3.3.6.2, Threatened and Endangered Species, and our final recommendations are presented in section 5.1, Comprehensive Development and Recommended Alternative.

The following fish and wildlife species are federally listed under the ESA and are known to exist in the project area: Puget Sound Chinook salmon ESU (*Oncorhynchus tshawytscha*), Coastal/Puget Sound bull trout DPS (*Salvelinus confluentus*), bald eagle (*Haliaeetus leucocephalus*), marbled murrelet (*Brachyramphus marmoratus*), northern spotted owl (*Strix occidentalis*), gray wolf (*Canis lupus*), and grizzly bear (*Ursus arctos*). No federally listed plant species are known to occur in the project area.

The Puget Sound Chinook salmon ESU is known to occur in the Baker and Skagit River basins and is listed as threatened under the ESA. The majority of Chinook salmon returning to the project are part of the Skagit River population. A limited numbers of spring Chinook salmon returning to the Lower Baker fish trap have been introduced on an experimental basis into the upstream Baker watershed. The Proposed Action would improve habitat conditions for Chinook salmon downstream of the project. Improved fish passage, handling, and transport facilities, and reduced duration of exposure of the reservoir inundation zone would improve the potential for increasing the number of Chinook salmon produced in the upper watershed. It is likely that some incidental take of Chinook salmon would occur due to operation and construction at the project. Therefore, the Proposed Action may affect and is likely to adversely affect Puget Sound Chinook salmon and designated critical habitat for this species.

The Coastal/Puget Sound bull trout DPS is found in the project area and is listed as threatened under the ESA. Bull trout found in project reservoirs and tributaries are considered part of the Lower Skagit River subpopulation, which is the only one considered “strong” by the FWS in the Puget Sound analysis area. The Proposed Action would improve migration conditions for adult and subadult bull trout in the Skagit River downstream of the project. Improved fish passage, handling, and transport facilities, and reduced duration of exposure of the reservoir inundation zone would improve conditions for bull trout upstream of the Lower Baker Development. It is likely that some incidental take of bull trout would occur due to operation and new construction at the project. Therefore, the Proposed Action may affect and is likely to adversely affect Coastal/Puget Sound bull trout and designated critical habitat for this species.

We conclude that construction of the new powerhouse could temporarily displace bald eagles. However, the Proposed Action would result in reduced levels of fish stranding and redd dewatering, which would help contribute to greater fish production and provide salmonid food resources for bald eagles. The Proposed Action may affect, but is not likely to adversely affect bald eagles.

Minor clearing of vegetation during project construction activities and increased noise levels associated with heavy equipment use could potentially cause short-term disturbances to marbled murrelets and northern spotted owls. Overall, the Proposed Action may affect, but is not likely to adversely affect marbled murrelets and northern spotted owls.

The occurrence of gray wolves and grizzly bears in the Baker River basin is very infrequent. The project could influence the distribution of deer and elk which are primary prey for the gray wolf and could result in increased human activity which could affect foraging habitat for grizzly bears. The Proposed Action may affect, but is not likely to adversely affect gray wolves and grizzly bears.

5.4.4 Essential Fish Habitat

Section 305(b)(2) of the Magnuson-Stevens Fishery Conservation and Management Act requires federal agencies to consult with the Secretary of Commerce regarding all actions or proposed actions that are authorized, funded, or undertaken by the agency that may adversely affect EFH.

The Pacific Fisheries Management Council (PFMC) has designated EFH for three species of Pacific salmon: Chinook, coho and Puget Sound pink salmon. Essential Fish Habitat for coho and Chinook salmon includes all those streams, ponds, lakes, wetlands, and other waterbodies currently or historically accessible to coho and Chinook salmon in Oregon, Washington, Idaho, and California, except upstream of impassable barriers identified by the PFMC. EFH for pink salmon includes all currently or historically accessible waters in the Puget Sound region.

Currently, the Baker River Project adversely affects Chinook, coho, and pink salmon EFH, specifically by modifying flow in the downstream Skagit River. However, staff-recommended measures for the project would improve conditions for Chinook, coho, and pink salmon EFH. As discussed in section 3.0, we recommend the following enhancement measures that would also enhance Chinook, coho, and pink salmon EFH: (1) continuing and expanding fish propagation and enhancements (Proposed Article 101); (2) improving upstream fish passage (Proposed Article 103); (3) improving downstream fish passage (Proposed Article 105); (4) improving flows below Lower Baker dam (Proposed Article 106); (5) augmenting gravel in the Baker and Skagit Rivers (Proposed Article 108); and (6) transporting LWD from project reservoirs to stockpile areas for future habitat enhancement projects (Proposed Article 109).

In summary, we conclude that relicensing the project would continue to adversely affect Chinook, coho, and pink salmon EFH, but that the above staff-recommended measures would reduce these effects compared to current conditions.

5.4.5 National Historic Preservation Act

The NHPA (16 U.S.C. 470 et seq.) (as amended) requires federal agencies to manage cultural resources under their jurisdiction and authorizes the Secretary of the Interior to maintain a National Register. The law also provides for the creation of SHPOs to facilitate the implementation of federal cultural resource policy at the state level, and for the responsible federal agency (i.e., agency official) to consult with Native American tribes who attach religious or cultural importance to cultural resources under their jurisdiction. Section 106 of the NHPA requires federal agencies to take into account the effect of any proposed undertaking on properties listed in, or eligible for listing in the National Register. If the agency official determines that the undertaking may have

adverse effects on properties listed in or eligible for listing in the National Register, the agency official must afford an opportunity for the Advisory Council to comment on the undertaking. The relicensing of the Baker River Project is considered an undertaking, and the Commission acts as the agency official.

Puget, under the authority of the Commission, has conducted Section 106 consultation with the OAH, Forest Service, Swinomish Indian Tribal Community, Upper Skagit Indian Tribe, and Sauk-Suiattle Indian Tribe, and other interested parties since 2000. This consultation included scheduled collaborative cultural resource workgroup meetings, as well as individual meetings conducted by the applicant. Commission staff will be continuing Section 106 consultations. Under the Proposed Action, Puget would implement its HPMP which would provide specific guidance to applicant personnel about the treatment of historic, archaeological, and traditional cultural resources during the term of any new license. Puget would also train field and supervisory staff in appropriate procedures to follow in the event of unanticipated discoveries of cultural resource material.

5.4.6 Wild and Scenic Rivers Act

Section 7(a) of The Wild and Scenic Rivers Act requires federal agencies to make a determination as to whether the operation of the project under a new license would invade the area or unreasonably diminish the scenic, recreational and fish and wildlife values present in the Skagit River corridor. Public Law 95-625 (November 10, 1978) designated the Skagit River as a Wild and Scenic River. The Skagit Wild and Scenic River is managed by the Forest Service to protect and enhance the free-flowing condition, water quality and outstanding remarkable values for which the river was designated while providing for public recreation and resource uses that do not adversely impact or degrade those values. The parties to the Settlement Agreement acknowledge that the Forest Service will make a final determination under section 7(a) of the Wild and Scenic Rivers Act, as to whether the project diminishes the wild and scenic values of the river.

In June 2006, the Forest Service submitted to the Commission a preliminary section 7(a) determination that the proposed project effects as described in the Commission's April 2006 draft EIS not only do not rise to the level of unreasonable diminishment, they will protect and enhance the recognized values of the Skagit Wild and Scenic River System. The Forest Service will make a final determination under section 7(a) coincident with the timing of submittal of the final 4(e) terms and conditions and informed by evaluation of the project under NEPA.