

## **5.0 STAFF'S CONCLUSIONS**

### **5.1 COMPREHENSIVE DEVELOPMENT AND RECOMMENDED ALTERNATIVE**

Sections 4(e) and 10(a) of the FPA, 16 U.S.C. 797(e) and 803(a)(1), require the Commission to give equal consideration to developmental and non-developmental uses of the waterway on which a project is located. When we review a hydropower project, we consider the water quality, fish and wildlife, recreational, and other non-developmental values of the waterway equally with the project's electric energy and other developmental values.

This section presents our rationale in balancing the developmental and non-developmental values and our recommendations for the plan best adapted to comprehensive development of the waterway. Our balancing analysis considers the comparative environmental effects of the alternatives (Chapter 3.0), their economic viability (Chapter 4.0), and their consistency with relevant agency recommendations, comprehensive plans, and laws and policies (sections 5.2, 5.3, and 5.4, respectively).

Based on our independent review and analysis of the Projects, the measures proposed by Avista, and the additional measures recommended by agencies and other stakeholders, we recommend relicensing the Projects as proposed with our additional staff-recommended environmental measures (Staff Alternative) as discussed below.

We are recommending the Staff Alternative because (1) issuance of new hydropower licenses would allow Avista to continue to operate the Projects as a dependable source of electric energy for its customers; (2) the 137.65-MW Projects would avoid the need for an equivalent amount of fossil-fuel-fired electric generation and capacity elsewhere, continuing to help conserve these non-renewable energy resources while reducing atmospheric pollution; (3) the public benefits of the Staff 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 provide improved recreation opportunities at the Projects.

#### **5.1.1 Post Falls Project Recommendations**

##### ***5.1.1.1 Measures Proposed by Avista***

Avista has proposed a comprehensive set of PME's for the Post Falls Project. Through our analysis in Chapter 3.0, we evaluated those PME's along with

stakeholder recommendations pertaining to several of those measures. We recommend that the following environmental measures proposed by Avista be included in any license issued for the Project:

### **Operational Measures**

- Implement parts 1, 2 and 3 of PF-AR-1: Post Falls Project Fish Protection, Mitigation, and Enhancement Program.
  - *Post Falls Project Minimum Discharge Flow:* Avista would maintain a 600-cfs minimum discharge flow at the Post Falls Project, with the option to maintain a 500-cfs flow under low-flow conditions.
  - *Post Falls Project Spawning and Emergence Flows:* Avista would be required to comply with the Post Falls Project discharge levels as outlined in the Upper Spokane River Rainbow Trout Spawning and Fry Emergence Protection Plan.
  - *Post Falls Project Ramping Rate:* Avista would be required to maintain a maximum allowable per-hour discharge downramping rate at the Post Falls Project of no more than a 4-inch-per-hour drop.
  - *Post Falls Gage:* Under PME PF-REC-3, Avista would cooperate with the USGS to equip the Post Falls gage (gage no. 12419000) on the Spokane River to provide real-time flow information.

### **Water Quality Measures**

- Implement Total Dissolved Gas Control and Mitigation Program (PF-WQ-1), which includes a TDG Control and Mitigation Program, spill gate operating protocols, and TDG monitoring and evaluation.

### **Terrestrial and Geologic Resource Measures**

- Implement Avista's proposed measure PF-TR-1, Coeur d'Alene Lake and Tributary Erosion Control and Wetland and Riparian Habitat Protection and Enhancement, which involves two components:
  - Erosion Control Program with modifications that include BIA's Coeur d'Alene Indian Reservation Shoreline Erosion Control Plan. This plan would require Avista to prepare and implement a plan to ameliorate Project-caused shoreline erosion on lands within the Coeur d'Alene Indian reservation that are within the Project boundary as identified in and by erosion study reports and relicensing TRWG in 2006 and 2004, respectively.

- Wetlands and Riparian Habitat Protection and Enhancement Program
- Annually monitor bald eagle nests for occupancy and nesting productivity; annually survey for new bald eagle nests; and develop Bald Eagle Nest Management Plans, all on Project lands (both Post Falls and Spokane River Projects).

**Aesthetic Resource Measures**

- Provide aesthetic flows at the Post Falls Project through the north channel spill gates (approximately 46 cfs) on Saturdays and Sundays from 12 noon until 6 p.m., Memorial Day weekend through Labor Day.

**Land Use and Management Measures**

- At the Post Falls Project, add 2,352 acres (currently within the 2,128-foot contour) to and remove 0.5 acre of private land east of the abandoned Corbin Ditch from the Project boundary as currently licensed.

**Recreation Resource Measures**

*Coeur d’Alene Recreation Protection, Mitigation, and Enhancement (PF-REC-2)*

- At Falls Park, improve the trail system, scenic overlooks, interpretive displays, and fencing.
- At Q’emiln Park, improve the trail system, scenic overlooks, interpretive displays, fencing, and parking.

*Post Falls/Spokane River Recreation Protection, Mitigation, and Enhancement (PF-REC-3)*

- Coordinate the late-spring and fall flow releases from the Post Falls Project to extend whitewater boating opportunities on the Spokane River and provide scheduled boating flow releases up to two weekends in August.

*Post Falls Project Public Outreach (PF-REC-4)*

- Prepare and implement an Interpretation and Education Plan with provisions for interpretive signs, public information, boating and recreational safety information, and coordination with relevant agencies that provide interpretation and educational materials/services.
- Conduct visitor surveys at the Project every 6 years.

**Cultural Resource Measures**

- Develop and implement the HPMP (SR-CR-1).

- Implement a PA that stipulates the preparation and filing of an HPMP for the Project within 1 year after license issuances.
- Implement Avista's alternative to BIA's cultural resources measure requiring Avista to prepare and implement an HPMP for NHPA-eligible cultural resources within the APE of Coeur d'Alene Indian reservation.

#### **5.1.1.2 Staff-Recommended Measures**

In the Staff Alternative, we also include the following additions/or modifications to Avista's proposed environmental PME measures:

#### **Water Quality Measures**

- Develop and implement a Water Quality Monitoring Plan to collect water temperature and DO data in Coeur d'Alene Lake for the first 5 years of any license that is issued for the Project. This plan would include monitoring areas of the lake within the Coeur d'Alene Indian reservation and areas outside of the reservation.
- Develop a Water Quality Monitoring Plan to collect water temperature and flow data in the Spokane River for the first 5 years of any license that is issued for the Project. This plan would include monitoring the Spokane River from the Post Falls tailrace to river mile 84.

#### **Aquatic Resource Measures**

- Develop and implement a Coeur d'Alene Lake Aquatic Weed Management Plan.

#### **Terrestrial and Geologic Resource Measures**

- Modify Avista's Erosion Control Program (PF-TR-1) to include a measure addressing erosion on tribal lands within the Project boundary and requiring annual reports instead of reports every 5 years.
- Develop a Bald Eagle Educational and Interpretive Program.
- Survey Project lands and develop provisions to control noxious weeds; incorporate these provisions into the proposed Land Use Management Plan.

#### **Cultural Resource Measures**

- Provide a schedule in the HPMP to evaluate all remaining cultural resources for National Register eligibility and resolve all adverse effects to historic properties. The schedule should prioritize site-specific measures for the resolution of Project-related adverse effects to the 71 archaeological sites and

other standing structures already considered eligible for inclusion in the National Register.

- Include a program in the HPMP to conduct cultural resource monitoring of historic properties, places known to contain human remains, and areas known to be at high risk from erosion and looting within the Projects' APE.

### **Recreation Resource Measures**

- Develop and implement a final recreation plan for the Post Falls Project with provisions for new and improved recreation facilities, public access, and interpretive signs.

### **Land Use and Management Measures**

- Develop and implement a final Land Use Management Plan for the Post Falls Project with provisions for identification of land use categories and associated acres, a buffer zone, and measures to monitor, control and/or eradicate noxious weeds.

#### ***5.1.1.3 Discussion of Key Issues and Measures Proposed by Stakeholders***

A complete summary and analysis of the measures proposed by Avista and others can be found in the applicable resource sections of Chapter 3.0. In addition to measures proposed by Avista, we recommend several additional measures that are listed in section 5.1.1.2. The following subsections summarize the basis for the Staff Alternative measures and discuss proposed measures we do not recommend be made provisions of any new license.

### **Coeur d'Alene Lake Water Levels**

We recommend adopting Avista's proposals to operate the Post Falls Project to continue to maintain Coeur d'Alene Lake levels at a summer full-pool elevation of 2,128 feet as early as practicable each year and to maintain the Coeur d'Alene Lake elevation at 2,128 feet until September 15, when the fall lake drawdown to an elevation as low as 2,120.5 feet would begin.

Filling the lake according to this proposal would allow Avista to rapidly fill the lake for summer recreation needs, while providing spring flows downstream of the Project to keep rainbow trout redds watered following the spring spawning period. The specific date at which the summer full pool elevation of 2,128 feet would be reached would vary from year to year, depending on the hydrology of the basin. The costs to implement the measure would be minimal. Initiating lake level drawdown on September 15 would be similar to the current regime, with the exception of providing a specific target date for initiation of the fall drawdown and a slightly longer duration when the lake is held at full pool. This would result in a

slightly longer period for summer full-pool elevation maintenance compared to current operations, resulting in a benefit to recreational resources at the lake. This would have a relatively minor effect on Coeur d'Alene Lake levels (and only in August and September) as compared to current operations.

Avista's proposal would not appreciably change the area inundated by Coeur d'Alene Lake under current operations. Because of an increased minimum discharge year-round at the Post Falls Project, some shallow areas would experience a slightly earlier drawdown, but this would typically vary from current conditions by a few inches at most. Avista's proposal would not cause any significant change in the location (i.e., the river mile) where static pool levels in Coeur d'Alene Lake intersect the major tributaries (Coeur d'Alene, St. Joe, and St. Maries rivers). The costs to implement this measure would be minimal.

We conclude that Avista's proposals for lake level management would continue to provide a reasonable balance between maintaining lake levels for summer recreational needs, providing instream flows for fish habitat, and maximizing the power benefits of the Project. We find that the benefits of these measures would justify the minimal costs.

We do not recommend adopting DOI BIA's preliminary 4(e) condition 3. This condition would require Avista to operate the Project (and manage Coeur d'Alene Lake levels) so that at all times it does not contribute to the exceedance of applicable numeric and narrative federal, state, and tribal water quality standards. The DOI BIA does not specify how the lake levels could be managed to achieve this goal; therefore, we have no way of evaluating the merits of this measure.

We also do not recommend adopting Avista's alternative 4(e) condition 3. In its alternative, Avista proposed to maintain the elevation of the lake in accordance with the requirements specified by DOI BIA's modified 4(e) conditions when they are filed with the Commission. Because the conditions have yet to be identified, we have no way of evaluating the merits of any of DOI BIA's potential provisions for lake level management.

### **Minimum Instream Flow Releases from Post Falls Dam**

We recommend adopting Avista's proposal and IDEQ, IDFG, WDOE, and WDFW's recommendations for a 600-cfs minimum instream flow release under normal operating conditions. We also recommend adopting Avista's proposal and WDFW, WDOE, IDFG, and IDEQ's recommendations for reducing minimum instream flows to 500 cfs between July 1 and September 15, when lake levels fall below elevation 2,127.75 feet.

As discussed in section 3.3.2.2.1, *Lake Level Management and Flow Releases*, we anticipate that a 600-/500-cfs instream flow release at Post Falls

Dam would provide flows of approximately 344 and 256 cfs, respectively, at the Barker Road site. These flows would also maintain summer water temperatures downstream of Sullivan Road within the optimal range for rainbow trout survival and growth (see section 3.3.3.2.2, *Effects of Project Flow Releases on Temperature*).

Avista's instream flow study predicts that a Post Falls Dam flow release of 600 cfs would provide 95 percent of maximum juvenile WUA and 84 percent of maximum adult WUA at the Barker Road site. A 500-cfs minimum instream flow would provide 100 percent of maximum juvenile WUA and 69 percent of maximum adult WUA. Therefore, even under the minimum instream flow release, a 500-cfs discharge would provide an increase of maximum juvenile and adult WUA of 20 percent and 42 percent, respectively, over what is provided under the current 300-cfs minimum instream flow release schedule. We estimate the annualized costs of Avista's proposed instream flow releases to be \$20,300.

We conclude that Avista's proposed 600-/500-cfs minimum instream flow regime would strike a reasonable balance between temperature and physical habitat needs for trout, because it would increase the amount of physical habitat for important life stages of trout without causing adverse effects on important summer refuge habitat downstream of Sullivan Road. We find that the benefits of this measure justify the cost.

We do not recommend adopting the Sierra Club, CELP, Northwest Whitewater Association, or Lands Council recommendations for minimum instream flow releases below Post Falls Dam. The Sierra Club and the CELP recommend that Avista release sufficient water (approximately 770 cfs) from Post Falls Dam to achieve a flow of 550 cfs at the Barker Road spawning site. The Lands Council recommends that Avista release sufficient water from Post Falls Dam to achieve a flow of 500 cfs at Barker Road. The Northwest Whitewater Association recommends generally higher instream flow releases of 700 to 800 cfs to achieve a minimum flow of 500 cfs at Barker Road.

Instream flow releases of 700 to 800 cfs would provide an additional 10 to 14 percent of maximum increase in adult WUA at the Barker Road site as compared to the staff-recommended 600-cfs flow release; however, these flows would also decrease the juvenile WUA by 4 to 9 percent of maximum. In addition, temperature modeling predicts that summer instream flow releases in excess of 700 cfs would likely reduce overall habitat suitability for rainbow trout by increasing water temperatures to greater than 21°C in critical summer refuge areas downstream of the Sullivan Road site. Water temperatures exceeding 21°C would likely limit trout growth and survival and would violate state water quality standards.

A 700- to 800-cfs instream flow release could also have adverse effects on the recreation resources of Coeur d'Alene Lake by potentially reducing the lake elevations if sufficient inflow to maintain lake elevations and instream flow requirements is lacking. The costs to provide a 700- to 800-cfs instream flow release are unknown, but undoubtedly they would be higher than the staff-recommended alternative. For these reasons, we conclude that the benefits of increased adult habitat availability for rainbow trout do not justify the potential adverse effects on Spokane River water temperature, Coeur d'Alene Lake levels, and the economics of the Project.

We do not recommend adopting the WDOE, WDFW, Lands Council, and Northwest Whitewater Association recommendations to monitor instream flow releases for a 5-year adaptive management monitoring period. We also do not recommend adopting the WDOE, WDFW, Lands Council, and Northwest Whitewater Association recommendations that the instream flow schedule be reevaluated and potentially modified at the end of the 5-year monitoring period.

The Adaptive Management Monitoring Program would be useful to assess actual habitat availability and temperatures effects from implementation of the new minimum instream flow regime. However, we believe that sufficient information exists to evaluate the effects of the staff-recommended instream flow regime on streamflow and aquatic habitat availability. Additionally, we are already recommending that Avista develop and implement a 5-year-long Water Quality Monitoring Program to collect water temperature and discharge data at various locations between the Post Falls tailrace and river mile 84. Therefore, additional temperature monitoring would have minimal additional benefits. If the results of the staff-recommended Water Quality Monitoring Program indicated that the new minimum instream flow regime was causing additional adverse effects on water temperature, Avista could propose a new minimum instream flow by filing an application to amend the license.

We estimate that the annualized cost to develop and implement a 5-year Adaptive Management Monitoring Plan would be \$5,900, with additional unknown costs should stakeholders decide to modify the 600-/500-cfs minimum instream flow release regime. We conclude that the benefits of the Adaptive Management Monitoring Program would not justify the cost, and therefore would not be in the public interest.

We do not recommend adopting the WDOE's recommendation that Avista prepare a Quality Assurance Project Plan. The Quality Assurance Project Plan would be developed to guide the implementation of the Adaptive Management Monitoring Program. As previously discussed, we do not recommend adopting the Adaptive Management Monitoring Program; therefore, there would be no benefit to preparing a Quality Assurance Project Plan to guide the implementation of this

measure. We estimate that the annualized cost to prepare a Quality Assurance Project Plan would be \$800 (not including implementation costs) and conclude that the lack of benefits of this measure would not justify the cost.

### **Spring Flows for Trout**

The WDFW recommends that Avista provide spring flows for the protection of incubation and emergence of trout in the free-flowing reach of the Spokane River downstream of the Post Falls Project. Specifically, WDFW recommends that for the period of April 15 through June 7 of each year, Avista provide 60 percent of the highest 7-day running average (consecutive days) of daily discharge flows from the Post Falls Dam recorded for the period of April 1-15 each year, or natural flow, whichever is less. WDFW also recommends that an annual report of flows and operations, including downramping events, for the period of spawning through emergence, including inflows to the river upstream of the dam, dam changes to outflow, and downstream flows be provided to the natural resource agencies.

We do not recommend adopting WDFW's provisions for rainbow trout incubation and emergence protection flows. WDFW estimates that releasing 60 percent of the April 1-to-April 15 spawning flows at the Post Falls Project would provide for continuous watering of 70 to 80 percent of the spawning area in the important 3-mile spawning reach of the upper Spokane River. However, releasing flows according to this schedule would likely adversely affect Post Falls Project power generation and the ability of Avista to rapidly fill Coeur d'Alene Lake for summer recreation needs. The costs of releasing the flows according to WDFW's recommendation are unknown, but they would likely vary from year to year depending on the inflow to the Project. However, regardless of the economic costs, we find that the benefits to rainbow trout would not justify the adverse effects on recreation resources.

We recommend Avista's proposal to continue to operate the Project under the *Upper Spokane River Rainbow Trout Spawning and Fry Emergence Protection Plan* (Avista, 2004). The plan was developed in consultation with the IDFG, USFWS, WDFW, and Coeur d'Alene Tribe for the purpose of maintaining Spokane River spring flow releases to keep the majority of downstream rainbow trout spawning redds watered until fry have emerged from the gravels (Avista, 2005). Under Avista's proposal, it would continue to monitor rainbow trout spawning activity and fry emergence at three reference sites in the upper Spokane River below Post Falls Dam. Based on monitoring results and anticipated streamflows, Avista would attempt to regulate upper Spokane River discharge to keep the majority of redds wetted until fry have emerged.

We estimate that Avista's proposal would maintain adequate flow over 50 to 70 percent of the important Harvard and Starr roads spawning sites each year. This flow is reasonably protective of rainbow trout, given the natural variability that would be expected in an unregulated system and natural year-class variability typical of trout populations. The costs to implement this measure would be minimal. We conclude that the benefits of this measure would justify the minimal costs.

We also recommend adopting Avista's proposal and WDFW's recommendation that Avista prepare an annual report of flows and operations for the period of spawning through emergence, including inflows to the river upstream of the dam, dam changes to outflow, downstream flows, and downramping events. This report would allow the resource agencies and Avista to annually evaluate the effectiveness of the Spawning and Fry Emergence Plan and determine the level of protection that would be afforded to these important life stages for this species. At an annualized cost of \$10,000, we conclude that the benefits of preparing the annual report would justify the cost.

### **Ramping Rate**

Downramping below the Post Falls Project does not occur for power production purposes, but occurs primarily when coming off of spill mode or during maintenance events, both of which are infrequent. The existing license does not include a ramping rate restriction, and it is important to note that the Post Falls Project cannot provide a ramping rate of less than 4 inches per hour without significant upgrades to the facility. Avista proposes to limit downramping to no more than a 4-inch-per-hour drop in downstream water levels as measured at USGS gage no. 12419000. The USFWS and IDFG support Avista's proposal. Avista also proposes to install electronic data transmission/telemetry equipment at the USGS gage no. 12419000 located downstream of Post Falls Dam.

We recommend adopting Avista's proposed and the USFWS and IDFG's recommended Post Falls Project ramping rate of no more than a 4-inch-per-hour drop in downstream water levels as measured at USGS gage no. 12419000. Flow downramping has the potential to strand fish in areas of the channel that are relatively low-gradient, or where pockets or side channels exist in the river channel. Compared to current operations, the proposed ramping rate would reduce the risk of stranding fry and juvenile fish and would provide a more gradual transition time for adult trout to relocate as river levels change. The costs to provide a 4-inch-per-hour ramp rate are unknown, but we do not anticipate that they would substantially affect the economics of the Project. We find that Avista's proposed ramp rates would enhance the existing high-quality fishery in the upper Spokane River. Accordingly, we conclude that the environmental benefits of

Avista's proposed ramp rates would be worth the minimal cost, and we include them in the Staff Alternative.

The CELP recommended a downramping rate of no more than 2 inches per hour at Post Falls, or ramping rates suggested by WDOE and WDFW. The Sierra Club recommended a maximum 1-inch-per-hour downramping rate from June 16 to October 31, and a 2-inch-per-hour rate from November 1 through February 15. WDFW recommended limiting the downramping rate at Post Falls Dam to no more than a 2-inch-per-hour drop in downstream water levels, as measured at the USGS gage no. 12419000 located on the Spokane River near Post Falls. The WDFW and CELP also recommended that electronic data transmission/telemetry be set up at the USGS gage site to improve measurement accuracy and to provide Post Falls Dam operators with real-time, downstream water level response.

We do not recommend adopting the CELP, Sierra Club, or WDFW ramping rate recommendations. Ramping rates of less than 4 inches per hour would be more protective of the aquatic environment than Avista's proposal. However, ramping rate studies conducted during licensing did not indicate that the level of protection afforded to rainbow trout would be substantially improved by implementing these measures.

As previously discussed, the current configuration of the Post Falls Project would not allow downramping rates of less than 4 inches per hour without significant upgrades to the facility. We do not know the cost of the upgrades, but it is likely that they would be costly because they would require structural changes to the facility. Given that the Project would continue to operate in run-of-river mode, frequent downramping below the Post Falls Project would not be expected to occur. Therefore, we find that more restrictive ramp rates would provide minimal additional benefit and would not justify any costs to upgrade the Post Falls Project.

We recommend adopting Avista's proposal, and the CELP and WDFW's recommendations, that Avista install electronic data transmission/telemetry equipment at the USGS gage no. 12419000 located downstream of the Post Falls Dam. Electronic data transmission would provide real-time flow data for instream flow compliance monitoring purposes and improve the understanding of the relationship between Post Falls Dam operations and downstream flows at important rainbow trout habitat sites. At an annualized cost of \$9,000, we find that the benefits of this measure would justify the cost.

IDFG recommended that in the event future upgrades to the Post Falls Dam allowed a more restrictive downramping rate, the 4-inch-per-hour rate may be revised upon agreement of Avista and cooperating resource agencies, subject to FERC approval. We do not evaluate the effects of future actions at this time. The

effects of any future measures would be evaluated when they are proposed by Avista through the filing of an application to amend the license.

### **Coeur d'Alene Lake Tributary Salmonid Habitat Restoration**

We do not recommend that Avista develop and implement a plan to restore tributary salmonid habitats located upstream of the influence of Coeur d'Alene Lake as stipulated by DOI BIA 4(e) condition 5 and recommended by the USFWS. Both the BIA and the USFWS state that the purpose of the restoration measure would be to mitigate the permanent and seasonal inundation of westslope cutthroat trout and bull trout tributary habitats due to the construction, presence, and operation of the Project.

In sections 3.3.4.2.3.1 and 3.3.6.2.1, we find that (1) inundation of the tributaries does not inhibit the migration of adult bull trout and westslope cutthroat trout between the lake and tributary spawning habitats or otherwise adversely affect bull trout and westslope cutthroat trout; (2) recent westslope cutthroat trout and bull trout population declines have not been attributed to lake level fluctuations, but rather to other non-Project activities such as mining, timber harvest, road and railroad construction, and agricultural practices; and (3) because other factors responsible for bull trout and westslope cutthroat trout population declines would continue to occur in the tributaries (e.g., degraded water quality), the recommended tributary habitat enhancements would likely be ineffective at increasing bull trout and westslope cutthroat trout populations. For these reasons, we find that restoration of tributary habitats lacks a nexus to existing and proposed Project operations, and the restoration measures would, in any case, have minimal benefits for the bull trout and westslope cutthroat trout populations.

In section 4.3.1, we determined that development and implementation of a Tributary Restoration Plan stipulated by DOI BIA under section 4(e) of the FPA and recommended by the USFWS would cost about \$3,000 annually to develop the plan. Implementation costs for this measure would be in addition to the development cost. We find that the lack of a nexus between current and proposed Project effects and the minimal benefits produced by the restoration measure would not justify the \$3,000 annual cost of implementing the measure, and therefore would not be in the public interest.

### **Coeur d'Alene Lake Basin Fisheries Enhancement**

We do not recommend the aquatic resource mitigation and enhancements for waters throughout the Coeur d'Alene Lake Basin as recommended by the Coeur d'Alene Tribe (construction of five stocked ponds on the reservation), the Sierra Club (non-specific, off-site native trout mitigation and enhancement measures), and the Lands Council (funding non-specific trout mitigation throughout the basin). Because the recommended measures are non-specific, we

are unable to assess the benefits and costs for the measures and the relationship of the measures to the Project. In addition, the recommending entities provided no justification, based on current conditions, to support implementation of the measures. Therefore, we have no justification for recommending any of these measures.

**Post Falls Fisheries Resources Public Information, Education, and Law Enforcement Program (Avista Proposed Measure PF-AR-1, Part 4)**

We do not recommend that Avista provide assistance and support for the development and implementation of a Public Information, Education, and Law Enforcement Program specific to bull trout and westlope cutthroat trout in the Coeur d'Alene Basin and wild rainbow trout in the Spokane River downstream of Post Falls Dam. Avista states that the purpose of the program would be to reduce illegal harvest of bull trout, westslope cutthroat trout, and wild rainbow trout. Federal and state game and harvest laws are not matters of Commission jurisdiction; therefore, we have no justification for recommending a license condition requiring Avista to provide assistance and support for the public's compliance with such laws.

**Post Falls Fishery Protection and Enhancement Program (Avista Proposed Measure PF-AR-1, Part 5)**

We do not recommend that Avista develop and implement a plan for a Post Falls Fishery Protection and Enhancement Program. Avista states that such a plan would outline a process for implementing and modifying the program over the term of a new license in consultation with "appropriate" agencies and "other cooperating parties." Potential activities in the Coeur d'Alene Lake Basin that would be funded by Avista through the program could include aquatic and habitat protection and restoration specifically directed at westslope cutthroat trout and bull trout populations. These activities could involve mainstem and riparian habitat restoration and protection projects; acquisition and long-term protection of private lands where aquatic habitat important to the salmonids exists; suppression of exotic species; collection of "required or relevant" baseline data; and fish stocking programs. Potential activities in the Spokane River downstream of Post Falls Dam that would be funded by Avista could include habitat protection and enhancement in the 15-mile reach of the Spokane River; additional fishery management activities supporting the protection and enhancement of wild rainbow trout populations in the reach; and provisions for new or improved fishing opportunities in nearby waters as potential means of diverting illegal angler harvest of wild rainbow trout from the Spokane River.

Technically speaking, the measures contemplated by the program could potentially benefit aquatic resources; however, Avista's proposal is problematic for a number of reasons. First, Avista's proposed scope is too broad and open-

ended to allow us to predict with any degree of precision exactly what measures would be implemented under the program, what associated benefits and costs would accrue under the program, and whether the chosen measures would be specifically related to the Project.

Second, the plan contemplates cost-sharing or funding third parties to implement the measures; however, the Commission has no jurisdiction over anyone other than the licensee to ensure the implementation of the measures.

Third, some of the measures could involve structures that would require ongoing maintenance or would involve the purchase of lands that would require ongoing management. Avista would need to include such lands (or, in the case of the structures, the underlying lands) within the Project boundary to allow the Commission the ability to ensure that the measures would accomplish the stated purposes. However, the lands and the associated measures that would be implemented are as yet unidentified. Consequently, we are unable to determine exactly which lands would relate to the Project, and therefore which lands would be needed for Project purposes and thus would need to be included within the Project boundary.

For these reasons, we have no justification for recommending that the proposed plan for implementing a Post Falls Fishery Protection and Enhancement Program be included in any license issued for the Project.

#### **Post Falls Fishery Assessment and Monitoring Program (Avista Proposed Measure PF-AR-1, Part 6)**

We do not recommend that Avista develop and implement a plan for a Post Falls Fishery Assessment and Monitoring Program. Avista states that the plan would outline how Avista would support population and related aquatic habitat assessments and monitoring for westslope cutthroat trout, bull trout, and wild rainbow trout in the Coeur d'Alene Lake Basin and Spokane River downstream of Post Falls Dam. Avista further states that as part of the program, it would support specific fishery and aquatic habitat assessment and monitoring activities that are designed to address Project-related population and habitat trends pertaining to the three target fish species.

It appears that the monitoring contemplated under this part would inform decisions as to measures that would be selected for implementation under Avista's proposed condition PF-AR-1 part 5 discussed above. However, as it is, we are not recommending that the proposed program in part 5 be included as a condition in any license issued for the Project. In any case, we find no direct connection between the monitoring and measures that would benefit the three salmonid

species. We therefore have no justification for recommending a license condition requiring Avista to develop and implement the monitoring program.

### **Coeur d'Alene Lake Basin Benthic Community Studies and Mitigation**

We do not recommend a license condition requiring Avista to carry out studies to evaluate the effects of habitat alteration on the benthic community, design mitigation measures, and develop a plan to implement such mitigation as recommended by the Sierra Club. We have the information, contained in Chapter 3.0 of this DEIS, to characterize the existing benthic community. We also find that Avista's proposed changes in operation are unlikely to produce a significant change in the benthic community relative to existing conditions. Therefore, we find that little to no benefit would be derived from monitoring the benthic community and conclude that the lack of benefits associated with implementing the measure would not justify the annual cost of \$400 plus any additional costs for as-yet-unidentified mitigation measures.

### **Coeur d'Alene Lake Mitigation Trust Fund**

We do not recommend that Avista establish and implement a mitigation trust fund as recommended by the Sierra Club and Lands Council for purposes of mitigating for alleged ongoing Project effects that would not be addressed through structural or operational changes to the Project. Specific mitigation measures, including the location of implementation, and specific effects that would be mitigated have not been identified by the recommending entities. We therefore are unable to analyze the specific existing conditions that would be enhanced by the measures, the specific benefits provided by the measures, and the relationship of the measures to the Project and Project effects. Due to this lack of information, we have no justification for recommending the fund.

### **Coeur d'Alene Lake Aquatic Weed Management (Avista Proposed Measure PF-AR-2)**

We recommend that Avista develop and implement a Coeur d'Alene Lake Aquatic Weed Management Plan for purposes of educating the public about, monitoring for, and controlling the establishment and spread of exotic/noxious weeds on Project lands and waters of the Post Falls Project. The plan would be developed in consultation with IDFG, Coeur d'Alene Tribe, City of Post Falls, IDPR, Kootenai County, and DOI. As we discuss in section 3.3.5.2.4, the plan would be beneficial for controlling the establishment and spread of noxious aquatic weeds on Project lands and in waters within Coeur d'Alene Lake and associated impounded tributaries.

We note that Avista proposes to simply fund the implementation of a Weed Management Program, presumably to a third party, in the amount of \$50,000 per

year; however, the Commission noted in its recently issued Settlement Policy Statement that it has no jurisdiction over any party to a hydroelectric licensing proceeding other than the licensee, and that the Commission would look to the licensee to undertake a particular measure that it requires to fulfill a project purpose. We find that a license requirement for Avista to simply provide \$50,000 for weed management would not ensure the performance of the proposed measure (i.e., weed management) considering that the Commission does not have the necessary jurisdiction over any third party that Avista may choose to implement the measure. We therefore recommend that Avista be fully responsible for providing the lake weed management measures by filing a plan for Commission approval to provide for lake weed management. We note that Avista would be free to reach an agreement with a third party to provide for weed management in accordance with a Weed Management Plan; however, under our recommendation, it would not be required to do so.

Avista's proposed Weed Management Program also presumes a spending cap of \$50,000 per year, with carryover funds from year to year not exceeding \$150,000. In its recently issued Settlement Policy Statement, the Commission noted that a licensee cannot satisfy the obligation to perform certain tasks (in this case, weed management) by a simple payment to another party, nor can the obligation be limited by a particular dollar figure. The Commission further stated that it expects the required measure to be performed by the licensee, even if the cost exceeds the agreed-upon cap. Consistent with the Commission's policy, we recommend that Avista be responsible for all lake weed management specified in an approved plan, notwithstanding the proposed spending caps.

We do not recommend that Avista, in collaboration with the Coeur d'Alene Tribe, develop and implement a Coeur d'Alene Reservation Aquatic Weed Management Plan to eradicate exotic and noxious aquatic weeds in waters affected by the Project that are within or adjoining the Coeur d'Alene Indian reservation as stipulated by DOI BIA 4(e) condition 6. The plan would include provisions to conduct annual surveys to map noxious weed populations, formulate management actions specific to each identified weed, coordinate management actions with management of other resources, develop criteria to measure the progress of exotic weed eradication, and file annual progress reports. While control of noxious aquatic weeds in Coeur d'Alene Lake at the reservation would be an achievable goal, complete eradication as called for in BIA condition 6 would be impossible to achieve, because the sources of noxious weeds are outside sources, including inflows and boats (e.g., plant fragments attached to motors). We therefore lack sufficient evidence for recommending a measure with the purpose of meeting a goal that Avista would be incapable of achieving.

## **Large Woody Debris Management**

We do not recommend that Avista develop and implement a Large Woody Debris Management Plan for the Post Falls Project, as recommended by WDFW. Information provided by Avista, including historical photographs of the Spokane River, shows that large woody debris does not typically accumulate along the Spokane River channel but is flushed downstream. Therefore, large woody debris placed downstream of the Post Falls Dam would not likely accumulate in the river channel to provide refuge for various life history stages of fish, aid in the formation of islands and side channels by redirecting flow and trapping sediments, or contribute to overall habitat complexity. The annual cost of developing and implementing the plan would be \$15,000. We find that the minimal benefits of the plan would not justify the cost.

## **Coeur d'Alene Lake Erosion Control**

As mitigation for erosion to Coeur d'Alene Lake by continued operation of the Post Falls Project, Avista proposed measure PF-TR-1, Coeur d'Alene Lake and Tributary Erosion Control and Wetland and Riparian Habitat Protection and Enhancement. Under the Proposed Action, Avista, in consultation with relevant cooperating parties, would implement the Erosion Control Program (a component of PF-TR-1) for the specific purpose of addressing the effects of continued operation of the Post Falls Project on erosion processes. Project-induced erosion is erosion caused primarily by daily flow fluctuations—i.e., erosion not attributable to flood flows or to phenomena such as boat- or wind-driven wave action, runoff from steep terrain during storms, and loss of vegetation due to fire and other natural causes.

The staff recommends that Avista file the Erosion Control Program with modifications as requested by the BIA and staff in section 3.3.1.2.4. Avista has estimated that this measure would cost \$100,000 annually over 15 years (part of the \$500,000 total annual cost for PF-TR-1). We have assumed the same annual cost for the entire licensing term and find that the benefits of this plan would be worth the cost. We find that this plan, with our modifications to file reports annually, along with planned and coordinated implementation with the tribes and the relevant natural resource agencies, would reduce the shoreline erosion on reservation lands within the Project boundary.

## **Coeur d'Alene Lake Water Quality**

The DOI BIA 4(e) condition 3 filing of July 17, 2006, called for Post Falls to be operated at all times so that “it does not contribute to exceedance of applicable numeric criteria and narrative Federal, State, and Tribal water quality standards.” As part of condition 3, DOI BIA did not specify how the Project should be operated in order to avoid contributing to exceedances of water quality

criteria. In a letter dated August 17, 2006, Avista indicated that to ensure that the Project would not contribute to water quality exceedances, the Project would need to be operated at the natural hydrograph. Operating at the natural hydrograph would likely result in significant effects on Project economics and could affect various environmental resources, including in fisheries, water quality, recreation, and socioeconomics. DOI BIA did not specify that the lake should be operated at the natural hydrograph, and it is not clear that this mode of operation was the intent of condition 3. Because DOI BIA did not specify how the lake should be operated to comply with condition 3, we cannot evaluate the specific environmental and economic effects of this section 4(e) condition. Therefore, we do not recommend including this measure in any license that would be issued for the Post Falls Project.

In a letter dated August 17, 2006, Avista proposed an alternative to DOI BIA condition 3. Specifically, Avista indicated it would operate the lake as defined in DOI BIA's modified conditions, which are expected to be filed with the Commission subsequent to the ongoing EAct proceeding. To date, DOI BIA's modified conditions have not been filed with the Commission; therefore, we are unable to evaluate the environmental and economic effects of this measure and we cannot recommend including it in any license that would be issued for the Post Falls Project.

As part of Avista's proposed Idaho Water Quality PME (PF-WQ-2), Avista would provide funding to support expansion of IDEQ's and the Coeur d'Alene Tribe's existing Water Quality Monitoring Program in Coeur d'Alene Lake. Our analysis suggests that collection of additional temperature and DO in Coeur d'Alene Lake would be useful for monitoring the effects of changes in Post Falls Project operations on water quality. However, while this program could potentially benefit aquatic resources, Avista's proposal is problematic for a couple of reasons. First, Avista's proposed scope is too broad and open-ended to allow us to predict with any degree of precision exactly what measures would be implemented, what benefits would accrue, and whether the chosen parameters would be related to Project effects. Second, this program contemplates funding third parties to implement the monitoring program; however, the Commission has no jurisdiction over anyone other than the licensee to ensure the implementation of the measures. Because of these concerns, we conclude that we have no justification for recommending the measure.

Another component of Avista's proposed Idaho Water Quality PME (PF-WQ-2) includes Avista funding the purchase and installation of two meteorological stations near Coeur d'Alene Lake. Installation of these stations would provide additional data on input parameters for the CE-QUAL water quality model; however, collection of this information appears to be unrelated to Project

effects and Project purposes. While additional model development may be useful for the IDEQ and the Coeur d'Alene Tribe, it would not serve to mitigate or monitor Project effects. Based on this information, we have no justification for recommending the measure.

In addition to recommending changes to operation of the Post Falls Project, DOI BIA's condition 3 included a comprehensive Water Quality Monitoring Program for Coeur d'Alene Lake. This Water Quality Monitoring Program would include annual sampling of various water quality parameters, phytoplankton, and benthos throughout Coeur d'Alene Lake. Available information suggests that the operation of the Project affects water temperature and DO only within Coeur d'Alene Lake. Therefore, we conclude that there is no evidence to justify monitoring many of the water quality parameters specified in DOI BIA's monitoring program, including phytoplankton and benthos. Additionally, while some monitoring may be appropriate to document the effect of proposed or recommended changes to Project operations, it is not clear that monitoring would need to continue throughout the license term. We estimate that the cost of this program would be approximately \$347,700 annually.

As an alternative to DOI BIA's Water Quality Monitoring Program, Avista proposed to monitor water temperature and DO within the Project boundary that occupies the Coeur d'Alene Indian reservation. This monitoring program was proposed by Avista as a separate and additional proposal to PF-WQ-2. We estimate that the cost of this program would be \$50,800 annually. While some monitoring may be beneficial to document the effect of proposed or recommended changes to Project operations, monitoring would not need to continue throughout the license term to realize the benefit. Because this program would include unnecessary sampling throughout the license term, we conclude that the benefits of Avista's alternative Water Quality Monitoring Program would not be worth the cost and we do not recommend including this measure in any license issued for the Project.

Avista's modeling suggests that operation of Post Falls Dam affects water temperatures and DO levels within Coeur d'Alene Lake. In the analysis section, we conclude that Avista's proposed changes to Post Falls operations, which include 600-cfs minimum flow releases and maintaining lake elevation at 2,128 feet until September 15 each year, would not significantly affect water quality within the lake. However, because the specific effects of these operational modifications have not been quantified, we recommend that Avista monitor water temperature and DO within Coeur d'Alene Lake for the first 5 years of operation under any new license that is issued for the Project. This monitoring would occur throughout the lake, including areas within the Coeur d'Alene Indian reservation. We estimate the cost of this program would be \$100,000 per year during the first

5 years of any new license that is issued. This equates to an average annual cost of \$41,700 per year over a 30-year period. Because this program would monitor potential Project effects on water quality parameters within Coeur d'Alene Lake that may be affected by changes in Project operations, we conclude that the benefits of this program would be worth the cost and we recommend including this measure in any license that is issued for the Project.

### **Water Quality Monitoring Downstream of Post Falls**

To determine the effects of the proposed minimum flow for Post Falls Dam on water quality in the Spokane River, Avista proposes to implement two Spokane River Water Quality Monitoring Plans as part of the Idaho (PF-WQ-2) and Washington (SRP-WQ-2) water quality PMEs. As part of PF-WQ-2, Avista proposes to fund a 5-year program to monitor water temperature and discharge in the portion of the Spokane River between Post Falls Dam and the Idaho/Washington state line. As part of SRP-WQ-2, Avista proposes to collect temperature and flow data on the Spokane River in Washington state, between river miles 84 and 90.4. Both of these monitoring programs are designed to evaluate the effects of the proposed Post Falls minimum flow on trout habitat and provide information that would better define the relationship between flow and water temperatures in the Spokane River.

However, because the Commission has no jurisdiction over anyone other than the licensee to ensure the implementation of the measures, we cannot recommend PF-WQ-2 since it includes funding other parties to implement this monitoring program. Additionally, while we conclude that there is some justification for monitoring water temperature downstream of Post Falls Dam, we can find no justification for implementing two separate Water Quality Monitoring Programs in this single reach of the river. As a result, we are recommending that Avista develop and implement a single Water Quality Monitoring Program that would be included in the Post Falls Project license. Under this program, Avista would develop a plan to collect water temperature and discharge data at various locations between the Post Falls tailrace and river mile 84 for 5 years. This program would monitor the effects of the proposed minimum flows on water temperature and trout habitat. We estimate that the cost of this program would be approximately \$30,000 per year for the first 5 years of any license that is issued. This equates to an average annual cost of \$12,500 per year over a 30-year period. We conclude that the benefits of this program would be worth the cost and we recommend that this measure be included in any license that is issued for the Project.

### **Post Falls Water Quality Monitoring Station**

The Sierra Club recommends that Avista install a water quality monitoring station on the Spokane River downstream of Post Falls Dam. The Sierra Club

indicates that this station would monitor discharge and would be installed to determine attainment or nonattainment of standards for water temperature, TDG, DO, and turbidity. While a specific schedule is not specifically stated in its filing, we assume that the Sierra Club's recommendation includes monitoring during each year of any license that is issued for the Post Falls Project. We estimate that the cost of each station would be approximately \$51,500 per year.

Our analysis indicates that Project operations can affect water temperatures and TDG in the Spokane River. Elsewhere in this section, we are recommending that Avista implement programs to monitor discharge and Project effects on water temperature and TDG during the initial years of any license. Additionally, our analysis suggests that DO levels are primarily the result of nutrient loading within the river system, and factors that influence turbidity (e.g., shoreline erosion in Coeur d'Alene Lake) are not Project-related (e.g., wind and boat wave action). Therefore, we conclude that we do not have evidence to recommend the Sierra Club's proposed monitoring station for water temperature, TDG, DO, and turbidity. Based on this determination, we do not recommend including this measure in any license that is issued for the Project.

### **Post Falls TDG**

The Sierra Club and the Lands Council recommend that Avista monitor TDG and implement operational measures to minimize TDG increases downstream of Post Falls Dam. These measures are included in Avista's proposal, and we are recommending that they be included in any license issued for the Post Falls Project. However, the Sierra Club and the Lands Council also recommend that Avista be required to develop a compensation program to address the losses of aquatic biota when TDG attainment would not be possible. The Sierra Club and the Lands Council indicate that elevated TDG can result in harm to aquatic organisms and that levels above 110 percent saturation have been recorded downstream of Post Falls Dam.

The Sierra Club and the Lands Council do not provide any evidence documenting or quantifying harm to aquatic organisms downstream of the Post Falls Dam. Additionally, they do not specify how Avista should quantify harm that may occur during periods when TDG exceeds water quality criteria. Finally, neither group provides any information to describe the form of compensation Avista should provide. Without more specific information, we are unable to assess the environmental and economic effects of this recommendation and we cannot recommend it. Additionally, because the staff-recommended measures would improve TDG conditions downstream of Post Falls Dam and the FPA does not

impose a no-net-loss requirement,<sup>1</sup> we do not recommend including this measure in any license that is issued for the Post Falls Project.

### **Coeur d'Alene Lake Wetland and Riparian Habitat Replacement and Enhancement**

In its section 4(e) condition 7 filed July 18, 2006, DOI would require Avista to develop and implement a Coeur d'Alene Indian Reservation Wetland and Riparian Habitat Plan. In this plan, Avista would be required to determine the total acreage and ecological function of forested, scrub-shrub, and/or emergent wetlands lost on the reservation between elevations 2,120 and 2,128 feet and develop a Restoration and Management Plan that includes monitoring, operation, and maintenance.

DOI says this condition is necessary because maintaining the summer lake level at elevation 2,128 feet has converted valuable emergent wetland habitat to less valuable aquatic bed or "open water" habitat. DOI questions Avista's analysis that total wetland acreage pre- and post-Project are similar because Avista relies on lower quality aquatic bed and "open water" habitat to offset vegetated wetland losses.

In its September 1, 2006, reply, Avista repeats its assertion that the Project has not caused a net loss of wetlands on the reservation, but rather a conversion of one wetland type to another. Further, Avista says DOI's condition 7 does not distinguish between wetland losses attributable to the Project and those attributable to other natural or anthropogenic forces. Avista says human activities unrelated to the Project, including diking and agriculture, have substantially reduced the total amount of wetland habitat on the reservation. Avista says DOI incorrectly assumes that all wetland losses are due to the Project.

Avista does not propose any changes to the Project that would significantly affect wetlands. In particular, Avista would maintain the same water levels in Coeur d'Alene Lake except to begin its normal fall drawdown (to elevation 2,120.5 feet) by September 15 each year. Further, regardless of whether wetland habitat was converted from one type to another or eliminated altogether, DOI's 4(e) condition 7 would require Avista to attempt to recreate pre-Project conditions. Because Avista does not propose changing operations in a manner that would significantly affect wetlands, and because Avista already proposes PF-TR-1, which would enhance wetlands at the Project, we do not recommend adopting DOI's 4(e) condition 7.

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<sup>1</sup> See, e.g., *Ohio Power*, 71 FERC ¶ 61,092 (1995) and *Indiana Michigan Power Co.*, 82 FERC ¶ 61,247 (1998).

In its section 10(j) recommendations filed July 18, 2006, the USFWS recommends that Avista implement PF-TR-1 with several modifications: (1) develop a plan to restore 532 acres of PFO1 wetlands and 250 acres of PSS wetlands; (2) develop a plan to protect and/or restore an additional 445 acres of PFO1 and 49 acres of PSS wetlands in the lower St. Joe River between river mile 0.0 and river mile 7.2, or above river mile 7.2 if necessary; and (3) protect and/or restore wetlands giving priority to natural levees in the lower St. Joe River, excluding areas covered by its first two recommendations above.

In its reply dated September 1, 2006, Avista recommends that the Commission reject these recommendations. Avista says the USFWS is again attempting to recreate pre-Project conditions rather than provide mitigation for future habitat losses. We agree that USFWS's recommended modifications to PF-TR-1 are designed to mitigate for either original Project effects or non-Project-related wetland losses. To calculate its recommended wetland mitigation, the USFWS compares the amount of wetlands existing today to that acreage existing over 70 years ago, using 1933 aerial photos. As discussed above, Avista's proposal to continue operating the Project would not significantly affect wetlands. Given the above, and Avista's proposal to enhance wetlands under PF-TR-1, we do not recommend the USFWS's two modifications to PF-TR-1. With regard to the USFWS's third modification, to give priority to natural levees in the lower St. Joe River, we note that Avista already includes this measure in PF-TR-1.

In its section 10(j) recommendations filed July 17, 2006, IDFG recommends that Avista implement PF-TR-1 with several modifications: (1) Avista's annual funds (\$500,000) for this measure should accumulate without a defined cap; (2) projects should be evaluated and prioritized based on wetland and erosion benefits independent of cultural resources, which are being addressed separately; (3) the amount of Avista's annual funding (\$500,000) to be allocated for erosion vs. wetlands should be defined—IDFG recommends \$150,000 for erosion and \$350,000 for wetlands; and (4) the process for selecting projects should be defined—IDFG recommends either (a) allocate \$167,000 for tribe/Avista-proposed projects and \$333,000 for USFWS/IDFG/Avista-proposed projects, or (b) select projects using a panel with one voting member each from Avista, the IDFG, the USFWS, and the tribe, with a majority vote needed to approve a project.

We have reviewed IDFG's above recommendations but do not recommend adopting them for the following reasons. First, IDFG agrees with Avista's proposed annual funding cap of \$500,000 for PF-TR-1 but recommends that any unused funds accumulate year-to-year. In its recently issued Settlement Policy Statement, the Commission noted that a licensee cannot satisfy the obligation to perform certain tasks (in this case, wetlands enhancement) by a simple payment to

another party, nor can the obligation be limited by a particular dollar figure. The Commission further stated that it expects the required measure to be performed by the licensee, even if the cost exceeds the agreed-upon cap. Consistent with the Commission's policy, we recommend that Avista carry out all wetlands enhancement in accordance with its wetlands plan, which would be developed under PF-TR-1, notwithstanding the proposed spending caps.

Second, we do not recommend that Avista evaluate and prioritize wetland projects developed under PF-TR-1 independent of cultural resources. Wetland projects often include ground-disturbing activities (e.g., the construction of berms, dikes, and water control structures) that can adversely affect historic properties. Conversely, wetland projects can help protect historic properties (e.g., by stopping erosion or by inundating areas and preventing collectors from removing archaeological artifacts). We recommend that Avista take into account the presence of any archaeological or historic properties when evaluating and prioritizing its wetland projects under PF-TR-1.

Finally, we do not recommend that Avista establish a predetermined ratio of funding for erosion control vs. wetland projects or a predetermined ratio for providing funding to third parties. Again, we recommend that Avista implement specific wetland projects to be identified in its wetlands plan filed with the Commission. We do not recommend using funding ratios to determine which wetland projects get selected. Avista should quantify the amount of shoreline erosion it intends to control and the acreage and type of wetland/riparian habitat it intends to protect and/or enhance in its plan developed pursuant to this measure. Specific goals (length of shoreline/number of acres) should be identified in Avista's plan, not Avista's proposed cost cap of \$500,000 annually. All shoreline protection and/or wetland/riparian habitat enhancement lands for which Avista would have an ongoing responsibility should be included within the Project boundary. Finally, we recommend that Avista file a monitoring report annually instead of every 5 years as proposed in PF-TR-1. This annual monitoring report should give the status of shoreline and wetland/riparian habitat protection under this measure.

The Lands Council and the Sierra Club, in separate comments filed July 17, and July 14, 2006, respectively, recommend that Avista implement measures to protect and enhance wetland and riparian habitat, including identifying high-quality areas and initiating remedial actions within the first year of a new license. The Lands Council also recommends that Avista create a habitat mitigation trust fund. As described above, Avista's proposed action would not significantly affect wetlands, and Avista's proposed measure PF-TR-1 would adequately enhance wetlands at the Project. We do not recommend wetlands mitigation or a separate mitigation trust fund as proposed by the Lands Council and the Sierra Club.

## **Bald Eagle Surveys, Monitoring, Management, and Education**

In its section 10(j) recommendations filed July 18, 2006, the USFWS makes several recommendations to protect bald eagles at both the Post Falls Project and the Spokane River Developments. The USFWS recommends that Avista annually survey the Project area during the bald eagle nesting season (about February through July) to identify any new nests and annually monitor all nests to determine occupancy and productivity. The USFWS also recommends that after monitoring all nests and nesting territories for at least 2 years, Avista prepare site-specific Nest Management Plans for selected nesting territories. Each plan would include key bald eagle use areas, areas where eagle/human conflicts occur, and specific conservation measures to protect eagles and eagle habitat over time. The USFWS recommends that Avista prepare and submit an annual bald eagle monitoring report with all survey and monitoring data to the USFWS, IDFG, WDFW, and the tribe.

In addition, the USFWS recommends that Avista develop a Bald Eagle Educational and Interpretive Program to inform the public about bald eagle use at Coeur d'Alene Lake and Lake Spokane. Under this program, Avista would develop recommendations for recreational users and homeowners to protect bald eagles and their habitat; would install interpretive signs at all Avista-owned and public recreation facilities; and would distribute habitat protection guidelines in an effort to get shoreline homeowners to protect suitable nesting trees and large snags.

In its September 1, 2006, reply, Avista accepts the USFWS's bald eagle recommendations and incorporates these measures into its proposed action with two exceptions. First, Avista says any bald eagle surveys, monitoring, and Nest Management Plans should apply only to Project lands. Second, Avista says a separate Bald Eagle Educational and Interpretive Program is not needed because such a measure is already included in its proposed Post Falls Public Outreach Plan, which would be developed under PF-REC-4.

We agree with Avista that all surveys, monitoring, and Nest Management Plans at the Post Falls Project should be focused on Project lands within the Project boundary. However, we disagree that PF-REC-4 already addresses the need for a Bald Eagle Educational and Interpretive Program. PF-REC-4 addresses "natural resource management and opportunities" along with other objectives but does not specifically address a Bald Eagle Interpretive Program. Such a program would minimize the effects of increased recreation on bald eagle use of Project lands and waters as recommended by the USFWS. We recommend that Avista incorporate into its Post Falls Public Outreach Plan, to be developed under PF-REC-4, a specific component that implements the USFWS's recommended Bald Eagle Educational and Interpretive Program. We estimate that such a

program would cost \$6,200 annually. We find that the benefits of this program would justify the costs.

### **Control of Noxious Weeds**

In its section 10(j) recommendations filed July 18, 2006, the USFWS recommends that Avista survey Project lands for noxious weeds and develop a Noxious Weed Management Plan for both the Post Falls Project and the Spokane River Developments. The USFWS recommends that this plan include a long-term program to monitor and report on noxious weed infestations. Avista, in its September 1, 2006, reply, recommends that the Commission reject this recommendation, saying noxious weed management would be addressed in its Post Falls Land Use Management Plan to be developed under PF-LU-1. We reviewed PF-LU-1 and found that it would generally address “weed management” but contains no details on which noxious weed species would be controlled, how they would be controlled, what management objectives would be established, or any other specific information on controlling noxious weeds. A detailed plan is needed to ensure that increased recreation at the Project does not spread noxious weeds on Project lands, which can adversely affect wildlife habitat. We recommend that Avista incorporate into its Post Falls Land Use Management Plan, to be developed under PF-LU-1, provisions that implement the USFWS’s recommended Noxious Weed Management Program. These provisions should include both monitoring and control measures and an annual monitoring report filed with the USFWS, the IDFG, and the Commission. We estimate that these provisions would cost \$11,200 annually. We find that the benefits of these provisions would justify the costs.

### **Cultural Resources**

DOI’s July 17, 2006, 4(e) conditions call for (1) the protection of cultural resources, (2) the identification, evaluation, and assessment of impacts resulting from Project activities to all cultural resources located on the Coeur d’Alene Tribe Indian Reservation within the Project boundary and within 100 feet of the Project boundary; and (3) the mitigation of these effects. The recommendation is for cultural resources located beyond 100 feet of the Project APE on Coeur d’Alene Tribe Indian Reservation land within the Project boundary to be identified, assessed, and treated. Additional protection measures include implementing a CRMP and initial Cultural Resource Action Program that would provide for law enforcement to prevent unauthorized looting, cultural resource monitoring, TCP inventory and evaluation, a cultural resources resurvey, a program to educate the public about the importance of cultural sites to the Coeur d’Alene Tribe, development of an Emergency Recovery Plan for inadvertent discovery of cultural sites, and management of material remains and records recovered from reservation lands.

Our analysis shows that the recommendations pertaining to inventorying, determining National Register eligibility, and assessing effects to historic properties beyond 100 feet of the Project boundary exceed section 106 requirements. The APE, as defined by the implementing regulations of section 106, relates only to the geographic extent where possible effects could occur to historic properties. Avista cannot be compelled to go beyond the extent of the defined APE to resolve effects to historic properties where there are no demonstrated Project-related effects. The staff agrees that the effects of the Proposed Action on TCPs have yet to be identified. Once TCPs have been identified, this analysis would ensure that the Project is in compliance with section 106 through the implementation of the HPMP (the HPMP would be equivalent to DOI's CRMP). If it were found that TCPs are being affected beyond the currently established APE, the APE could be adjusted accordingly.

The Commission's licensing jurisdiction would not allow it to require Avista to provide law enforcement to prevent unauthorized looting on archaeological sites located on reservation lands. Thus, we do not recommend that Avista provide such a measure. Nevertheless, continued monitoring of archaeological sites should be part of an ongoing program through implementation of the HPMP, and Avista should include a protocol in the HPMP to contact the appropriate law enforcement organization to aid in the apprehension of unauthorized looters on archaeological sites within the reservation and other Project lands.

The staff's proposed compromise measure is to implement Avista's counterproposal to DOI's 4(e) condition involving cultural resources. Once the TCP inventory and evaluation are complete, we recommend that Avista address in the HPMP the potential effects of the Proposed Action on TCPs. Additionally, we recommend that Avista include a program in the HPMP to conduct cultural resource monitoring of historic properties, places known to contain human remains, and areas known to be at high risk from erosion and looting located on reservation land within the Project APE. In accordance with the *Section 106 Historic Properties Evaluation Technical Report* (HRA, 2006), materials collected from the Project area in Washington would be curated with the Spokane Tribe, while artifacts collected from the Project area in Idaho would be curated with the Coeur d'Alene Tribe.

## **Recreation Resources**

Avista proposes to implement a Post Falls Project recreation plan (PF-REC-1), which we discuss in section 3.3.8. In this section, we discuss Avista's Post Falls Project proposed PME measures for recreation as identified in Appendix B of its Proposed Action, PF-REC-1 to PF-REC-4.

We recommend Avista's recreation measures for the Post Falls Project in part only, because the proposed recreation plan primarily focuses on partnering with certain entities and providing funds (cost-share). Falls Park and Q'emiln Park are located within the existing Post Falls Project boundary. The remaining recreation sites are located outside the Project boundary. Based on the best available information, including staff's utilization of a geographic information system (GIS), we find that certain recreation sites are not needed for Project purposes, which we discuss herein.

For those recreation sites that currently lie outside the Post Falls Project boundary, we determined, by utilizing GIS and considering the Project's record, that certain recreation sites would enable the public to better use Project lands and waters and would serve a Project purpose, and that the land occupied by such sites should therefore be brought into the Post Falls Project boundary. We discuss our findings below.

#### *City of Coeur d'Alene Parks*

Under the Coeur d'Alene Lake Recreation (PF-REC-2) PME measure, Avista proposes to cooperate with the City of Coeur d'Alene to develop new and/or improve existing recreation facilities at numerous city parks adjacent to Coeur d'Alene Lake and the upper Spokane River. Proposed measures include (1) installing showers at the 16.5-acre Coeur d'Alene City Park for beach users; (2) installing a new restroom shelter at McEuen Field and Park; and (3) connecting Mill River Park to the Idaho Centennial Trail at the Huetter Road overpass. Avista would provide funding to the city (not to exceed \$27,750 for construction of the three projects) and provide \$3,500 annually to supplement the city's O&M. Pursuant to the LWCF Act, Coeur d'Alene City Park was developed with LWCF funds. See section 5.4.5 for further discussion.

Using GIS, we were able to assess the approximate location of the City of Coeur d'Alene Park and estimate that the park is 500 feet from the Project boundary. However, as a component of PF-REC-2, we are unable to ascertain the locations of McEuen Field and Park or of Mill River Park. Another component of the measure, "to develop new and/or improve recreation facilities at numerous city parks," does not provide enough detail for us to assess. Avista did not provide any concrete measures with measurable requirements and Project impacts related to the City of Coeur d'Alene Park (e.g., the length of the trail proposed to connect Mill River Park to the Idaho Centennial Trail and Project-related recreational use data). We are therefore unable to draw a connection between the Post Falls Project and the City of Coeur d'Alene Park measures. While Avista and the City of Coeur d'Alene are free to enter into cost-sharing side agreements, we do not recommend that such provisions be included as a requirement in any license issued for the Project.

### *Boat Ramp Extensions*

Under PF-REC-2, Avista proposes to cooperate with IDFG, Kootenai County Parks and Waterways, IDPR, and the Coeur d'Alene Tribe to extend seven boat ramps in order to accommodate "off-season" recreational use on Coeur d'Alene Lake and the Coeur d'Alene and St. Joe Rivers. These seven boat ramps are at Anderson Lake (owned by IDFG), Round Lake (owner unknown), Sun Up Bay (owned by Kootenai County), Loffs Bay (owned by IDFG), Harrison (owned by the City of Harrison), Chatcolet (owned by the State of Idaho and Coeur d'Alene Tribe), and Rocky Point (owned by the State of Idaho). Avista would provide funds in an amount not to exceed \$75,000 for all of the boat ramp extensions. We are unsure whether this cost includes O&M costs or any costs necessary to dredge the area(s) prior to extending the boat ramps. Of the seven sites, we note that the Louis Berger Group (2004a) did not identify Round Lake in its recreational site inventory. Consequently, we are unable to analyze any potential Project-related effects on Round Lake.

Using GIS, we were able to assess approximate locations of the six sites where the boat ramps would be extended. Anderson Lake, Sun Up Bay, Lofts Bay, Harrison, and Rocky Point boat access sites are located on the existing Post Falls Project boundary adjacent to Coeur d'Alene Lake. The Chatcolet boat access site is located on the existing Project boundary adjacent to Chatcolet Lake, which is part of Coeur d'Alene Lake.

Based on data collected for the *Recreation Facility Inventory and User Surveys Report* (Louis Berger Group, 2004a), the six boat launches comprise an estimated total 6.9 acres. Given the nexus between the Post Falls Project and recreational use at Anderson Lake, Sun Up Bay, Lofts Bay, Harrison, Chatcolet, and Rocky Point boat access sites, as discussed in section 3.3.8, improving these sites could help meet projected demand for recreational resources in the "off-season" and provide recreational opportunities for disabled persons through barrier-free facilities. We find that the Anderson Lake, Sun Up Bay, Lofts Bay, Harrison, Rocky Point, and Chatcolet boat access sites provide public access to Project waters, are needed for Project purposes, and should be made Project facilities. We recommend that these sites be brought into the Project boundary. Avista and the appropriate party may enter into an off-license agreement for O&M, but Avista would have the ultimate responsibility for redeveloping (as necessary), operating, and maintaining the sites in accordance with the staff's recommended standards. Signage at the sites should identify them as part of the Post Falls Project.

Under PF-REC-2, Avista identifies various federal, state, and local agencies and tribes with whom Avista would consult. Avista should also consult with the City of Harrison because the city owns the boat access area at Harrison, and we

recommend expanding the Project boundary to include the lands occupied by this facility.

*Coeur d'Alene Tribe*

Under the Coeur d'Alene Lake Recreation (PF-REC-2) PME measure, Avista proposes to cooperate with the Coeur d'Alene Tribe to develop or enhance water-based recreational facilities on Coeur d'Alene Lake and its tributaries. Avista would provide funding to the tribe (not to exceed \$200,000) for development of a recreational site and provide \$30,000 annually to supplement the tribe's O&M of the facility.

The location of the proposed recreation site is unknown, and the measure does not include enough detail to allow the staff to assess the potential benefits of the specific measure. The parties do not provide any substantial evidence to support the measure or how the measure would be related to Project effects or Project purposes. Although the measure states that the site would educate tribal members and the public about the Coeur d'Alene Tribe, our recommended HPMP would contain a provision for public awareness of cultural resources within the Project's defined APE. We therefore do not recommend the measure as a requirement in any license issued for the Project.

*Idaho Department of Parks and Recreation*

At Higgens Point, under PF-REC-2, Avista proposes to cooperate with IDPR to construct a breakwater for the boat-launch area, stabilize the shoreline that is eroding due to wind fetch, and reconstruct the docks at the boat-in-only sites. Avista would provide funding to the state (not to exceed \$100,000) for redevelopment and provide \$10,000 annually to supplement the state's O&M of the facility.

We find that the measures proposed for the Higgens Point boat launch area could protect the shoreline from soil erosion resulting from a combination of Project-induced boat waves and non-Project-induced waves (e.g., waves produced by winds). Assuming the breakwater would be within the existing Project boundary, it would be difficult to argue against including, within the Project boundary, any land occupied by the Higgens Point boat launch area. The boat launch area and day-use area occupy 15 acres. The estimated annual recreational use at this site is 7,771 people (Louis Berger Group, 2004a); improving the site could continue to provide public access to Project waters and help meet a demand for boating and fishing during the term of a license, if a license were issued. We recommend that the Project boundary be expanded to include the land occupied by the Higgens Point boat launch and day-use area and that the facilities be made Project facilities. We find that the benefits of this measure would justify the costs.

### *USDA Forest Service*

Under PF-REC-2, Avista proposes to cooperate with the Forest Service to enhance and maintain water-based Forest Service facilities at Bell Bay Campground, Medimont Recreation Area, and Rainey Hill Recreation Area. Avista would provide funding to the Forest Service (not to exceed \$54,000) for project redevelopment and provide \$15,000 annually to supplement the Forest Service's O&M. We assume that "water-based" facilities refer to the boat dock and/or boat ramp and associated parking at the recreation sites. Bell Bay Campground's boat dock is located on Coeur d'Alene Lake. Both Medimont Recreation Area and Rainey Hill Recreation Area are boat-access sites with boat ramps on the Coeur d'Alene River. In its August 24, 2006, filing, the Forest Service section 10(a) recommendation no. 2 (Recreation Facilities on USDA Forest Service lands), Forest Service modified condition 1 (Post Falls recreation plan) and modified condition 2 (Recreation Facilities on USDA Forest Service Lands) do not include enough detail to allow the staff to assess the potential benefits of the specific measures.

According to a USGS quadrangle map, there is a  $\pm 40$ -foot margin of error with a licensee's existing project boundary. Based on the staff's GIS analysis, Bell Bay Campground and Medimont Recreation Area are located approximately 40 feet from the existing Post Falls Project boundary. An estimated one-third of Rainey Hill Recreation Area is located within the Project boundary; an estimated two-thirds are located about 100 feet from the Project boundary. Annual recreational use at the sites is as follows: Bell Bay Campground, approximately 1,575 people; Medimont Recreation Area boat launch, approximately 886 people; and Rainey Hill Recreation Area boat launch, approximately 457 people (Louis Berger Group, 2004a). As discussed in section 3.3.8, we find that the 101-acre Bell Bay Campground (including the boat dock), the 1-acre Medimont Recreation Area boat access site, and the 5-acre Rainey Hill Recreation Area boat access site are linked to the effects and purposes of the Project.

Extending the Project boundary to include these lands would enable the public to better use Project lands and waters, thereby ensuring continued public access. Improving the three Forest Service recreation sites could enhance the recreational resources and help meet a need for a variety of recreational opportunities and activities. Also, improving these sites could potentially alleviate overcrowding at other recreation sites. It would be appropriate, therefore, to include Bell Bay Campground, the Medimont Recreation Area boat access site, and the Rainey Hill Recreation Area boat access site within the Post Falls Project boundary.<sup>2</sup> We estimate that these facilities would add approximately 107 acres of

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<sup>2</sup> See, 111 FERC ¶ 61,450 (2005).

federal land to the Project area, which would increase Avista's annual costs by an estimated \$4,500. We find that the benefits of this measure would justify the costs.

Avista and the Forest Service could enter into an off-license agreement for O&M, but Avista would have the ultimate responsibility for redeveloping (as necessary) and maintaining these three recreation sites in accordance with the staff's recommended standards.<sup>3</sup> We assume the Forest Service would continue to operate the facilities.

#### *Trailer Park Wave Access Site*

Under the Post Falls/Spokane River Recreation (PF-REC-3) PME measure, Avista proposes to cooperate with several parties and develop the Trailer Park Wave access site. The preferred location for the site is on private land.<sup>4</sup> Avista would provide funds (not to exceed \$150,000) for site acquisition and/or site development and provide \$15,000 annually for O&M.

The Trailer Park Wave access site (Class II whitewater difficulty) is located immediately downstream from Post Falls Dam. To access the site, boaters either paddle upstream from another access point or park at Falls Park, carry their kayaks approximately 0.25 mile to the north bypass reach, then paddle approximately 0.5 mile to the site. In concert with this measure, Avista proposes to coordinate the late spring and fall flow releases from its Post Falls Dam to extend whitewater boating opportunities at the site. Based on survey results (Louis Berger Group, 2004b) and Avista's proposal to provide additional whitewater boating flow releases, we conclude that the Trailer Park Wave access site is directly associated with public access to Project waters and that a sufficient nexus to reservoir-based recreation exists. Providing new public access would significantly benefit the public. We conclude there is a demonstrated need for a new public access site, of which the Trailer Park Wave access site could fulfill such a need. Upon acquiring the site, or an alternative site, we recommend that those lands be brought into the Project boundary.

In light of our findings, we recommend that Avista develop and, upon Commission approval, implement a final recreation plan for the Post Falls Project. The plan, at a minimum, should provide one or more maps that clearly identify all Project-related recreation sites, including those identified above by the staff to be included within the Post Falls Project boundary. For the Project, we identify, at a minimum, those facilities as Falls Park and Q'emiln Park (currently within the Project boundary); six boat ramps and associated access areas at Anderson Lake,

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<sup>3</sup> See, Final Environmental Impact Statement, Baker River Hydroelectric Project, Washington (Project No. 2150), September 2006.

<sup>4</sup> Avista states that alternative locations would be considered if reasonable acquisition or an easement negotiation with the landowner were not successful.

Sun Up Bay, Lofts Bay, Harrison, Chatcolet, and Rocky Point; three Forest Service recreation sites (Bell Bay Campground, Medimont Recreation Area boat access site, and Rainey Hill Recreation Area boat access site); Higgins Point boat launch area and day-use area; and the Trailer Park Wave access site.

The final recreation plan should also discuss the following: (1) specific measures to improve recreation sites or public access to the sites; (2) signage; (3) soil erosion and sediment control measures where ground-disturbing activities are proposed; (4) periodic monitoring and site clean-up at the recreation sites, or assessment and implementation of a “carry-in/carry-out” policy for the public to carry out their trash; (5) removal of abandoned docks, other human-constructed structures, and debris from Coeur d’Alene Lake; (6) the process for considering the needs of the disabled in the design of each facility; (7) an implementation schedule, including construction; (8) cost estimates and schematic drawings of the facilities; and (9) documentation of consultation with the City of Post Falls, Kootenai County Parks and Waterways, IDFG, IDPR, USDA Forest Service, NPS, Northwest Whitewater Association, and the Coeur d’Alene Tribe and specific descriptions of how the agencies’ and tribe’s comments and recommendations are accommodated by the plan.

The final recreation plan should be developed in concert with the staff-recommended Coeur d’Alene Lake Aquatic Weed Management Plan.

Under the Staff Alternative, the cost for developing and implementing a final recreation plan for the Post Falls Project, including the extension of the Project boundary to include land occupied by an existing recreational facility, is unknown. We find that our recommended recreation measures for inclusion within a final recreation plan would significantly benefit the public.

#### *Aids to Navigation*

For the Post Falls Project, Avista proposes to cooperate with the Coeur d’Alene Tribe, Kootenai County Parks and Waterways, Benewah County, and the U.S. Coast Guard to install aids to navigation on Coeur d’Alene Lake and along the Coeur d’Alene and St. Joe rivers as the rivers enter the lake (PF-REC-2). Avista would provide funding (not to exceed \$20,000) for new or enhanced navigational aids and provide \$1,000 annually to supplement the parties’ O&M costs.

As required under Commission regulations, Avista has developed and implements a Public Safety Plan for the Post Falls Project. The plan is reviewed regularly by Commission staff. As discussed herein, Avista should be responsible for ensuring that Project-related measures are implemented, not just for providing funds.

Avista's existing Public Safety Plan provides for boater restraining cables, signs, and other measures to protect the public at the Project. Because we are now recommending that certain recreation sites be included within the Post Falls Project boundary, Avista should, in consultation with the Commission's Portland Regional Office, modify its Public Safety Plan, under Part 12.42 of the Commission's regulations, to address public safety at the sites. Commission staff would advise Avista on whether its modified Public Safety Plan should include a provision for installing aids to navigation on Coeur d'Alene Lake and along the Coeur d'Alene and St. Joe rivers as the rivers enter the lake. Until such time, we defer to the Commission's Portland Regional Office regarding Avista's proposal to install aids to navigation.

### **Land Use and Management**

Avista proposes to implement a Land Use Management Plan for the Post Falls Project (PF-LU-1). As discussed in section 3.3.9, Avista provides general information about its proposed Land Use Management Plan, rather than specific measures. In addition, Avista would provide financial support, which we discuss herein under *Other Measures/Funds*.

Because we recommend that certain lands occupied by a recreation site be brought into the Post Falls Project boundary and because the lands need to be managed, we recommend that Avista develop and implement a final Land Use Management Plan that clearly identifies, on one or more maps, those lands and associated acres. The plan should also identify, on one or more maps, Avista's proposal for adding 2,352 acres and removing 0.5 acre from within the Project boundary. The plan, at a minimum, should contain a table that identifies land use categories and associated acres, a buffer zone, specific programs, implementation, and an update. The Land Use Management Plan should be developed in concert with the staff-recommended plan for terrestrial resources in order to take into account noxious weeds and measures to control and/or eradicate such species.

### **Other Measures/Funds**

#### *Coeur d'Alene Lake Recreation*

Avista proposes to cooperate with the BLM to develop or enhance water-based recreational facilities on Coeur d'Alene Lake and its tributaries (PF-REC-2). Avista does not provide any specific information about the measure; however, Avista proposes to provide funding for the measure (not to exceed \$200,000) and provide BLM \$33,000 annually to supplement the cost for O&M. In its July 18, 2006, filing, BLM, through Interior, states that BLM plans to develop a yet-to-be-determined recreation site adjacent to the Post Falls Project boundary with an estimated cost of \$800,000. Avista's contribution (under the 25-percent scenario) would be \$200,000. BLM does not provide any substantial evidence to support the

measure or how the measure would be related to Project effects or Project purposes. Due to the lack of specificity concerning this measure, we do not recommend the measure as a requirement in any license issued for the Project.

At five recreation sites—Mowry State Park, Heyburn State Park, Hawleys Landing, and two swimming beaches at Plummer and Rocky Point—as defined under PF-REC-2 (Coeur d’Alene Lake Recreation), Avista would provide funds to the respective entity for site development. In addition, Avista would provide funds (not to exceed \$60,000) for the Trail of the Coeur d’Alenes and provide \$7,500 annually to supplement the Coeur d’Alene Tribe’s O&M. The recreational site inventory (Louis Berger Group, 2004a) did not identify Heyburn State Park. Neither Avista nor the parties demonstrated how these facilities are utilized in connection with the Project, nor did they demonstrate the need for the facilities. Avista and the parties did not provide any concrete measures with measurable requirements and Project impacts that we could assess. For example, Avista proposes to cooperate with IDPR and provide funds (not to exceed \$2,000) to place sand at the Plummer and Rocky Point swimming beaches.

We note that Hawleys Landing and Rocky Point are approximately 1 mile apart. Under the Proposed Action, both the Hawleys Landing and Rocky Point boat ramps would be extended to accommodate “off-season” recreational use. Under the Staff Alternative, we recommend extending the Rocky Point boat ramp to provide for sufficient recreational opportunity at Rocky Point and elsewhere (see *Boat Ramp Extensions*, above), so that Hawleys Landing would not be necessary for Project purposes and should not be considered a Project facility. We reach a similar finding for Corbin Park boat ramp (PF-REC-3, Post Falls/Spokane River Recreation). Based on the record, we have no justification for recommending that site development at Mowry State Park, Heyburn State Park, Hawleys Landing, and the two swimming beaches at Plummer and Rocky Point be included as a requirement in any license issued for the Project.

As a part of its Land Use Management Plan for the Project, Avista proposes to provide financial support for enforcement of land- and water-based laws and regulations administered by federal, state, and local governmental entities. The entities would apply to Avista for funds prior to an annual spring meeting in order to allow Avista and the entities to evaluate their proposals.

As part of its proposed recreation plan for the Post Falls Project (PF-REC-1), Avista would establish a recreation enhancement fund. Under this plan, Avista would contribute its financial obligation (an estimated 25 percent) to the fund, particularly for measures adjacent to Coeur d’Alene Lake, in the event an agency with principal ownership or management responsibilities of a recreation site could not secure the necessary funds to complete a recreation project.

Under the Proposed Action, Avista would (1) purchase and maintain a boat to support recreation-related PME measures (total cost to be shared 50/50 with the Spokane River Developments); (2) support office staff time and expenses associated with new PME measures; (3) provide for administrative overhead costs for new PME measures; and (4) provide funds to ensure continued public access and to develop new and/or reconstructed recreation projects on or adjacent to the Project.

As stated in the Commission's *Policy Statement on Hydropower Licensing Settlements*,<sup>5</sup> the most reasonable approach for a licensee is to establish what measures the licensee must perform, and for any settlement between a licensee and third parties regarding the performance of those measures to be addressed in off-license agreements. The recreation enhancement fund does not include any specific Project-related measures. We conclude there is no connection between the proposed recreation enhancement fund and Project effects and purposes. We also find that providing funds for agency personnel to perform an agency's duties is not the responsibility of Avista in the context of a Commission license and is not required to fulfill the Project's purposes. Thus, we do not recommend these provisions as a requirement in any license issued for the Project.

Avista proposes to contribute an estimated 25 percent of the total Project cost for a recreation measure and enter into a separate agreement with an appropriate entity for O&M. As stated in the Commission's *Policy Statement on Hydropower Licensing Settlements*, a licensee cannot satisfy the obligation to perform tasks by a simple payment to another party, nor can the obligation be limited by a particular dollar figure. Dollar figures agreed to by the parties are not absolute limitations. If the Commission requires that a facility be maintained, it can look only to the licensee to do so. Thus, a license condition must place responsibility for completion of a measure on the licensee. Any cost-sharing agreement may have to be a matter of contract between the licensee and the third party, but would not be something that Commission staff would recommend for inclusion in a license.

#### ***5.1.1.4 Staff Alternative with Mandatory Conditions***

DOI BIA and USDA Forest Service have made preliminary 4(e) conditions (described in section 2.3.3 and in Table 2.2.4-1) which, when finalized, would need to be included in a new license for the Post Falls Project. Similarly, the USFWS has made its preliminary recommendation to reserve the authority to prescribe the construction, operation, and maintenance of fishways in the future during the term of the licenses for the Post Falls Project and Spokane River Developments. These recommendations, when finalized, would also need to be

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<sup>5</sup> See, 116 FERC ¶ 61,270 (2006).

included into new licenses for the Projects. Incorporation of these mandatory conditions, as they are currently proposed, into a new license would cause us to eliminate a few of the environmental measures that we include in the Staff Alternative. These measures would include staff-recommended measures that would no longer be necessary if the respective DOI BIA 4(e) conditions prevail. The measures that would be replaced by DOI BIA mandatory conditions include the following:

- Develop and implement a Water Quality Monitoring Plan to collect water temperature and DO data in Coeur d'Alene Lake for the first 5 years of any license that is issued for the Project. This plan would include monitoring areas of the lake within the Coeur d'Alene Indian reservation and areas outside of the reservation.
- Implement Avista's alternative to BIA's cultural resources measure requiring Avista to prepare and implement an HPMP (instead of a CRMP) for NHPA-eligible cultural resources within the APE of Coeur d'Alene Indian reservation.
- Implement Avista's alternative to BIA's erosion control measure requiring Avista to prepare and implement a plan to ameliorate Project-caused shoreline erosion on lands within the Coeur d'Alene Indian reservation as identified in and by erosion study reports and relicensing TRWG in 2006 and 2004, respectively.
- As part of Avista's Coeur d'Alene Lake and Tributary Erosion Control and Wetlands and Riparian Habitat Protection and Enhancement measure (PF-TR-1), along with its alternative measure to provide a separate Coeur d'Alene Indian Reservation Shoreline Erosion Control Plan, the staff recommends that Avista follow a portion of DOI's 4(e) condition 2, filed July 18, 2006, as specified in section 3.3.1.2.4 and discussed in section 5.1.1.3, and file reports annually instead of every 5 years.

We also would not recommend that Avista implement its Coeur d'Alene Lake Aquatic Weed Management Program (PF-TR-1) for the Project area within the Coeur d'Alene Indian reservation, because the DOI BIA 4(e) measure to develop an Aquatic Weed Management Plan would be redundant and more extensive than Avista's proposed measure developed in consultation with agencies and stakeholders.

## **5.1.2 Spokane River Developments**

### **5.1.2.1 Measures Proposed by Avista**

Avista has proposed a comprehensive set of PME's for the Project. Through our analysis in Chapter 3.0, we evaluated those PME's along with stakeholder recommendations pertaining to several of the measures. We recommend including the following environmental measures proposed by Avista in any license issued for these developments:

#### **Operational Measures**

- Avista would continue to operate the Spokane River Developments in a manner similar to current Project operations, but with a slightly modified reservoir management approach.
- Aesthetic flows would continue to be provided year-round at Monroe Street Development and also would be initiated seasonally at Upper Falls Development.
- Avista would limit the drawdown of Lake Spokane to 14 feet, except under certain emergency conditions. This would constitute a change from current license conditions, which allow for a 24-foot maximum drawdown, but would not be a change from the way the Project has been operated in recent years.
- Avista would attempt to periodically draw down Lake Spokane during the winter to expose the lake bed to freezing temperatures to reduce the occurrence of aquatic weeds such as Eurasian watermilfoil.

#### **Water Quality Measures**

- Implement a Total Dissolved Gas Control and Mitigation Program (SRP-WQ-1), which includes a TDG Control and Mitigation Program, spill gate operating protocols, TDG monitoring and evaluation, and a comprehensive Long Lake Development TDG Abatement Plan.

#### **Terrestrial and Geologic Resource Measures**

- Implement a Lake Spokane/Nine Mile Terrestrial, Riparian and Wetland Habitat Protection and Enhancement Program (SRP-TR-1) with provisions for acquiring a 47-acre parcel of wetlands and incorporating about 320 acres of Avista-owned land located within 200 feet of Lake Spokane into the Project boundary.

- Implement a Spokane River Project Transmission Line Management Program (SRP-TR-2) with provisions for managing vegetation, protecting raptors, and preparing monitoring reports.
- Annually monitor bald eagle nests for occupancy and nesting productivity; annually survey for new bald eagle nests; and develop Bald Eagle Nest Management Plans, all for Project lands (both Post Falls and Spokane River Projects).

### **Aesthetics**

- Provide a 200-cfs minimum daily aesthetic flow through Upper Falls Developments bypass reach (north and middle channels) from 10 a.m. to one-half hour after sunset, Memorial Day weekend through September 30, and implement channel restoration as feasible to enhance visual conditions.
- Continue to provide the current 200-cfs minimum daily aesthetic flow from 10 a.m. to one-half hour after sunset daily, year-round, at Monroe Street Development.

### **Land Use and Management Measures**

- At Upper Falls and Monroe Street Developments, remove 2.8 acres that serve no Project purpose.
- At Nine Mile Development, remove 66 acres that serve no Project purpose.
- At Long Lake Development, add 350.1 acres associated with a proposed shoreline buffer, the Nine Mile Resort, a dredged boat area, and a section of primary transmission line.

### **Recreation Measures**

#### *Spokane River Recreation Protection, Mitigation, and Enhancement (SRP-REC-2)*

- Continue to manage Huntington Park at Monroe Street Development as a natural area/buffer.

#### *Spokane River Public Outreach Protection, Mitigation, and Enhancement (SRP-REC-3)*

- Prepare and implement an Interpretation and Education Plan with provisions for interpretive signs, public information, boating and recreational safety information, and coordination with relevant agencies that provide interpretation and educational materials/services.
- Conduct visitor surveys at the Project every 6 years.

*Lake Spokane/Nine Mile Reservoir Recreation Protection, Mitigation, and Enhancement (SRP-REC-4)*

- Remove the land occupied by the Nine Mile cottages from within the existing Spokane River Developments boundary because it does not serve a Project purpose.
- Develop an interpretative center at Nine Mile Development, relocate the existing Nine Mile overlook to accommodate disabled individuals, and redevelop the interpretive displays at the Spokane House.
- Develop and identify the Nine Mile portage, including construction of a four- or five-stall parking area and installation of informational and warning signs at the Plese Flats access site and upstream from Nine Mile Dam.
- Reconfigure Nine Mile Resort as a day-use area in concert with the WSPRC's proposed new campground at Riverside State Park.
- Extend the Centennial Trail approximately 1 mile from Sontag Park to the Nine Mile Resort.
- Identify and develop up to 10 boat-in-only semi-primitive campsites on Lake Spokane.
- Redevelop the Long Lake Dam overlook to include interpretive signs and a reconfigured parking area.
- Develop a carry-in-only boat launch immediately downstream from the Long Lake Dam picnic area.

**Cultural Resource Measures**

- Develop and implement the HPMP (SR-CR-1).
- Implement a PA that stipulates the implementation of an HPMP for the Project.

**5.1.2.2 Staff-Recommended Measures**

In the Staff Alternative, we also include the following additions or modifications to Avista's proposed environmental PME measures:

**Water Resource Measures**

- Develop and implement a Long Lake Oxygen Monitoring and Enhancement Plan to assess the feasibility of improving DO conditions in the Spokane River downstream of Long Lake Dam.

### **Aquatic Resource Measures**

- Stock 6,000 catchable-sized sterile trout (6 to 8 inches) in Upper Falls Reservoir; 9,000 catchable-sized sterile trout in Nine Mile Reservoir, and 20,000 catchable-sized sterile trout in Lake Spokane (Long Lake Reservoir).
- Develop and implement a Lake Spokane Aquatic Weed Management Plan.

### **Terrestrial and Geologic Resource Measures**

- In addition to erosion-related measures in Lake Spokane/Nine Mile Terrestrial, Riparian and Wetland Habitat Protection and Enhancement Program (SRP-TR 1), include provisions to prepare and implement a Sediment Management Plan for Nine Mile and Long Lake Developments.
- Develop a Bald Eagle Educational and Interpretive Program.
- Survey Project lands and develop provisions to control noxious weeds; incorporate these provisions into the proposed Land Use Management Plan.

### **Recreation Resource Measures**

- Develop and implement a final recreation plan for the Spokane River Developments with provisions for new and improved recreation facilities, public access, and interpretive signs.

### **Land Use and Management Measures**

- Develop and implement a final Land Use Management Plan for the Spokane River Developments with provisions for identification of land use categories and associated acres, a buffer zone, and measures to monitor, control and/or eradicate noxious weeds.

#### ***5.1.2.3 Discussion of Key Issues and Measures Proposed by Stakeholders***

A complete summary and analysis of the measures proposed by Avista and others can be found in the applicable resource sections of Chapter 3.0. In addition to measures proposed by Avista, we recommend several additional measures that are listed in section 5.1.2.2. The following subsections summarize the basis for the Staff Alternative measures and discuss proposed measures we do not recommend be made provisions of any new license.

#### **Spokane River Fish Protection, Mitigation, and Enhancement Program (Avista Proposed Measure SRP-AR-1)**

We do not recommend a license condition requiring Avista to develop and implement its proposed Spokane River Fish Protection, Mitigation, and

Enhancement Program with the goal “to reduce and mitigate for potential adverse effects on aquatic habitat and associated fish resources associated with the continued operation of the Upper Falls, Monroe Street, Nine Mile, and Long Lake HEDs and to enhance those resources.” Avista has not identified any specific measures to implement as part of the program. The proposed program would be nothing more than an administrative framework with a broad aquatic resource goal. Avista would provide up to \$125,000 annually for the term of any new license to be used to implement as-yet-unidentified PME projects.

In its Settlement Policy Statement, the Commission stated that in order for it to include a specific environmental measure in a license, it would need to be able to conclude that the measure relates to Project effects and purposes. In this instance, no specific measures beyond the administrative framework and goal of the program have been proposed; therefore, not only are we unable to conclude that the program and its measures would be related to Project effects and purposes, but we are also unable to assess the benefits of implementing the program or to determine whether the program’s measures would have a nexus to the Project.<sup>6</sup> We therefore have no justification for recommending that Avista’s proposed program be included in any license issued for the Project.

### **Stock Status Monitoring Program**

We do not recommend a license condition requiring Avista to develop, fund, and implement a Stock Status Monitoring Program with provisions for monitoring long-term trends in trout populations in the Spokane River, conducting a baseline assessment of trout populations in the Spokane River between the non-Project Upriver and Monroe Street dams, and performing a radio telemetry survey on redband trout in the Little Spokane River and upper Lake Spokane, as recommended by WDFW. The studies that WDFW recommends are for general basin fishery management, including waters outside of the influence of the Project (e.g., unimpounded reaches of the Little Spokane River), bearing no significant relationship to the Project. Although the information could be used to assess the effect of the Project on aquatic resources, we already have the information we need to assess the effects of the Project on aquatic resources, as discussed in this DEIS. WDFW provided no basis or justification for why the extensive existing information is insufficient to analyze Project effects or how additional information would be used to protect and enhance aquatic resources at the Project (e.g., identification of specific measures that would protect or enhance fishery resources). Further, the information that WDFW recommends would have no direct benefits for aquatic resources, as the studies themselves would not be

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<sup>6</sup> Although Avista has proposed an annual cost cap of \$125,000 for plan implementation, there is no way for us to relate this cost to any environmental measures because none were actually proposed. We therefore are left in the position of not only being unable to assess the benefits of the program, but ultimately the cost as well.

measures that would provide protection or enhancement. The annual cost of implementing these studies would be at least \$20,000.<sup>7</sup> We find that the lack of benefits to aquatic resources of implementing the monitoring program would not justify any cost.

### **Large Woody Debris Management**

We do not recommend that Avista develop and implement a Large Woody Debris Management Plan for the Spokane River Developments, as recommended by WDFW. Information provided by Avista, including historical photographs of the Spokane River (letter filed with the Commission on September 1, 2006), shows that large woody debris does not typically accumulate along the Spokane River channel but is flushed downstream. Therefore, large woody debris placed downstream of the Project's dams would not likely accumulate in the river channel to provide refuge for various life history stages of fish, aid in the formation of islands and side channels by redirecting flow and trapping sediments, or contribute to overall habitat complexity. The annual cost of developing and implementing the plan would be \$15,000. We find that the minimal benefits of the plan would not justify the cost.

### **Gravel Augmentation**

We do not recommend that Avista develop and implement a Gravel Augmentation Program for the Spokane River Developments with provisions to provide up to 10,000 cubic yards of gravel annually to free-flowing reaches of the Spokane River in the Project area, with gravel size geared toward resident spawning salmonids. Studies by Avista (e.g., Parametrix, 2003c) show that spawning habitat in the Spokane River is underutilized by resident rainbow trout. Avista previously placed gravel in the Spokane River downstream of Monroe Street Development; however, that action failed to enhance the trout population. We therefore conclude that placement of gravel in the free-flowing reaches of the Spokane River in the Project area would likely provide few, if any, benefits for the resident trout population. The annual cost of developing and implementing the plan would be \$20,000. We find that the few benefits of the plan would not justify the cost.

### **Removal of Culverts**

We do not recommend a license condition requiring Avista to develop and implement a plan to replace culverts with fishways in the Little Spokane River drainage, as recommended by WDFW. The culverts are not project facilities and bear no relationship to the Spokane River Developments; therefore, we have no

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<sup>7</sup> We are unable to provide a more accurate estimate of the cost of monitoring long-term trends in trout populations, because too little information with regard to the scope of the study was provided by WDFW.

justification for recommending that the culvert replacement be included as a condition of any new license issued for the Project.

### **Fish Stocking**

We do not recommend WDFW's recommendation for a Fishery Enhancement/Supplementation and Monitoring Program for the Spokane River Developments. WDFW's fish stocking recommendation calls for unspecified numbers of trout to be annually stocked at Nine Mile Development, Monroe Street Development, and Upper Falls Development, and for 75 trout per acre (trout sized at 3.5 fish per pound) to be annually stocked at Lake Spokane. Starting in year 1 and continuing to year 10, 20 percent of stocked fish would be marked with Floy tags and collected by unspecified means. A creel survey would be conducted every 3 years as long as stocking would continue to determine angler use, harvest rates, and fish growth. A 2-year salmonid fish distribution survey would be conducted in Lake Spokane to monitor fish distribution. Under this recommendation, if the stocking program did not achieve a trout fishery in Lake Spokane (defined as sustaining 40,000 angler trips annually with an average rate of return of creel of 2.5 fish per angler visit), then fish would be stocked in other lakes "within the region" for the duration of any license issued for the Project.

The recommendation is too general in order for us to determine the benefits and costs of the program or the nexus between Project effects and locations that would be stocked. For example, there is no information regarding stocking rates at four out of five of the developments, and the recommendation contemplates stocking at unspecified lakes in place of the Project reservoirs. The recommendation is also problematic in that no basis or supporting information is provided for the recommended fishery goal of 40,000 angler trips annually with an average catch of 2.5 fish per angler visit. For these reasons, we have no justification for recommending WDFW's trout stocking program.

We are instead recommending that Avista annually stock 6,000 catchable-sized sterile trout (6 to 8 inches) in Upper Falls Reservoir (40 trout per acre); 9,000 catchable-sized sterile trout in Nine Mile Reservoir (20 trout per acre), and 20,000 catchable-sized sterile trout in Lake Spokane (Long Lake Reservoir) (4 trout per acre).<sup>8</sup> As we state in Chapter 3.0, Avista has been annually stocking several thousand catchable-sized trout in Upper Falls and Nine Mile Reservoir, providing a fishery that is popular with public. Although only 4 trout per acre would be stocked in Lake Spokane as compared to 20 trout per acre in Nine Mile Reservoir and 40 trout per acre in Upper Falls Reservoir, the stocking amount in

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<sup>8</sup> By letter filed on September 1, 2006, Avista stated that it may stock at these levels as part of its proposed Spokane River Fish Protection, Mitigation, and Enhancement Program (Avista Proposed Measure SRP-AR-1); however, Avista did not definitively propose to either stock at the stated levels or even to stock the project reservoirs at all.

Lake Spokane is commensurate with the fact that Lake Spokane predominantly supports a popular and high-quality warmwater fishery (largemouth bass, smallmouth bass, yellow perch, and crappie) as opposed to a coldwater fishery like the other reservoirs (see section 3.3.4.1.5). We again note that there is no information in the Project record showing that higher levels of trout stocking than those currently occurring in the Project area are needed to support the public's use of the fishery. The cost of stocking trout at the stated levels would be about \$25,000 annually.<sup>9</sup> We find that the benefits of trout stocking would justify this cost.

### **Fisheries Public Outreach, Education, and Compliance**

We do not recommend that Avista provide assistance and support for the development and implementation of a Fisheries Public Outreach, Education, and Compliance Program specific to rainbow trout in the Spokane River, as recommended by WDFW. WDFW states that the purpose of the program would be to reduce illegal harvest of rainbow trout in the Spokane River through educational signage and brochures, public presentations, and support for compliance-related (presumably law enforcement) activities. Federal and state game and harvest laws are not matters of Commission jurisdiction; therefore, we have no justification for recommending a license condition requiring Avista to provide assistance and support for the public's compliance with such laws.

### **Lake Spokane Aquatic Weed Management**

We recommend that Avista develop and implement a Lake Spokane Weed Management Plan for purposes of educating the public about, monitoring for, and controlling the establishment and spread of exotic/noxious weeds at Lake Spokane, including Eurasian watermilfoil, yellow floating heart, and purple loosestrife. The plan would be developed in consultation with the Stevens County Conservation District, Stevens County Noxious Weed Control Board, Spokane County Conservation District, Spokane County Noxious Weed Control Board, WDFW, WDNR, WSPRC, WDOE, and Lake Spokane Protection Association. The plan would include provisions for (1) educating the public and area landowners about threats posed by the spread of aquatic weeds and the means of limiting their spread or reducing their occurrence; (2) in-field weed control actions (e.g., mechanical removal of plants, physical barriers to plant growth, chemical treatments, biological treatments, and Project operational measures; and (3) monitoring of weed control. As we discuss in section 3.3.5.2.4, the plan would be beneficial for controlling the establishment and spread of noxious aquatic weeds at Lake Spokane.

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<sup>9</sup> We base this cost on WDFW's (letter filed on July 17, 2006) statement that \$1,875 provides for the stocking of between 2,000 and 2,500 trout, which equates to about \$0.85 per fish.

We note that Avista proposes to simply fund the implementation of a Weed Management Program, presumably to a third party, in the amount of \$20,000 per year plus an additional \$5,000 per year for monitoring should the \$20,000 be fully allocated for weed control. However, the Commission noted in its recently issued Settlement Policy Statement that it has no jurisdiction over any party to a hydroelectric licensing proceeding other than the licensee, and that the Commission would look to the licensee to undertake a particular measure that it requires to fulfill a Project purpose. We find that a license requirement for Avista to simply provide \$20,000 for weed management and up to an additional \$5,000 for monitoring would not ensure the performance of the proposed measure (i.e., weed management) considering that the Commission does not have the necessary jurisdiction over any third party that Avista may choose to implement the measure. We therefore recommend that Avista be fully responsible for providing the lake weed management measures by filing a plan for Commission approval to provide for the weed management. We note that Avista would be free to reach an agreement with a third party to provide for weed management in accordance with a Weed Management Plan; however, under our recommendation, they would not be required to do so.

Avista's proposed Weed Management Program also assumes a spending cap of \$25,000 per year (\$20,000 for the implementing the plan plus an additional \$5,000 for monitoring, if needed). In its recently issued Settlement Policy Statement, the Commission noted that a licensee cannot satisfy the obligation to perform certain tasks (in this case, weed management) by a simple payment to another party, nor can the obligation be limited by a particular dollar figure. The Commission further states that it expects the required measure to be performed by the licensee, even if the cost exceeds the agreed-upon cap. Consistent with the Commission's policy, we recommend that Avista carry out all weed management specified in an approved plan, notwithstanding the proposed spending caps.

### **Nine-Mile Reservoir Aquatic Weed Management**

We do not recommend a license condition requiring Avista to develop and implement an Aquatic Weed Management Plan for Nine Mile Reservoir, as recommended by WDFW. Exotic weeds such as Eurasian water milfoil do not occur in Nine Mile Reservoir; therefore, we lack the substantial evidence to recommend an Aquatic Weed Management Plan for Nine Mile Reservoir.

### **Spokane River Trout Protection, Mitigation, and Enhancement Programs**

We do not recommend the development and implementation of a Spokane River Trout Protection, Mitigation, and Enhancement Program as recommended by the Sierra Club and the Lands Council. Neither entity proposed specific environmental measures to be implemented and associated locations as part of the programs; therefore, we are unable to (1) conclude that the program and its

measures would be related to Project effects and purposes; (2) assess the benefits and costs of implementing the program; and (3) determine whether the program's measures would have a nexus to the Project. We therefore have no justification for recommending that the Sierra Club's and Lands Council's recommended trout PME programs be included in any license issued for the Project.

### **Spokane River Benthic Community Studies and Mitigation**

We do not recommend a license condition requiring Avista to carry out studies to evaluate the effects of habitat alteration on the benthic community, design mitigation measures, and develop a plan to implement such mitigation, as recommended by the Sierra Club. We have the information, contained in Chapter 3.0 of this DEIS, to characterize the existing benthic community. We also find that Avista's proposed changes in operation are unlikely to produce a significant change in the benthic community relative to existing conditions. Therefore, we find that little to no benefit would be derived from monitoring the benthic community and conclude that the lack of benefits associated with implementing the measure would not justify the annual cost of \$400 plus additional costs for as-yet-unidentified mitigation measures.

### **Spokane River Mitigation Trust Fund**

We do not recommend that Avista establish and implement a mitigation trust fund as recommended by the Sierra Club and the Lands Council for purposes of mitigating for alleged ongoing Project effects that would not be addressed through structural or operational changes to the Project. Specific mitigation measures, including the location of implementation, and specific effects that would be mitigated have not been identified by the recommending entities. We therefore are unable to analyze the specific existing conditions that would be enhanced by the measures, the specific benefits provided by the measures, and the relationship of the measures to the Project and Project effects. Due to this lack of information, we have no justification for recommending the fund.

### **Erosion Control Measures in the Spokane River**

As we discuss in section 3.3.1.2.4, there is little connection between Project operations and erosion at Lake Spokane or Nine Mile Reservoir.

Avista is proposing erosion protection measures in its SRP-TR-1, Lake Spokane/Nine Mile Terrestrial, Riparian and Wetland Habitat Protection and Enhancement measure, along with funding to support regional efforts to reduce erosion (and downstream sedimentation) in the Hangmen Creek Watershed.

Avista is also proposing continued adherence to the current drawdown limit of 14 feet, so the frequency and magnitude of slope failures at Lake Spokane would not increase.

The Sierra Club and Lands Council filing of July 17, 2006, recommends that Avista prepare, fund, and implement an Erosion Control, Prevention, and Restoration Program for Lake Spokane. WDFW 10(j), filed July 18, 2006, recommends the same plan for Nine Mile Reservoir.

Because we cannot find a clear nexus between Project operations and erosion at Lake Spokane or Nine Mile Reservoir, the staff agrees with the licensee's recommendation that no further PME's are necessary for Lake Spokane and Nine Mile Reservoir. The benefit of providing erosion mitigation in the Spokane River would be worth the small part of the \$350,000 cost to implement SRP-TR-1 along with the \$10,000 annual cost for Hangman Creek.

### **Sediment Transport in the Spokane River**

Upper Falls and Monroe Street Developments are currently passing all sediment, aside from highly localized deposition of larger bedload material at Monroe Street, and are not inhibiting natural sediment transport on that portion of the Spokane River. There is no evidence to suggest that the occasional increase in base flow during the summer months, or other proposed flow adjustments under the Proposed Action, would change the nature of how these hydroelectric developments influence sediment transport.

The current sediment supply and transport rates in Nine Mile Reservoir and Lake Spokane would continue to be similar to current conditions under the Proposed Action. Proposed Action measure SRP-TR-1 is intended to support regional efforts to reduce erosion and sediment inflow from Hangman Creek.

The Sierra Club and Lands Council filings of July 17, 2006, proposed that Avista fully study sedimentation and perform aggressive sediment management in the Spokane River reservoirs. The WDOE's July 17, 2006, filing and WDFW's July 18, 2006, filing also urge more study and planning for this issue. Avista recommended in its August 1, 2006, filing that the Commission reject these proposals.

Nine Mile Reservoir and Lake Spokane have been capturing sediment from upstream since their construction. In 1994, two turbines at Nine Mile were replaced due to excessive damage from sediment. In 1996, a sediment bypass tube was installed in an effort to extend the life of the turbines (NHC, 1999). In 1999, it was estimated that approximately 5 years of available sediment storage remained before the area upstream of the spillway is filled (NHC, 1999). This will increase sediment being passed through to Lake Spokane and the rate of accumulation in Lake Spokane. Therefore, changes in the downstream environment could accelerate. Significant sediment accumulation can alter the Project environment in several ways: channel changes and erosion; an increase in Eurasian watermilfoil

habitat; increased nutrient loading and cycling; increased shallow water habitat, leading to warmer temperatures; and an aquatic environment more favorable to non-native fish species.

The proposal to replace the wooden flashboards at Nine Mile Dam with a more permanent rubber dam has the potential to change the sediment transport and deposition in the upper reach of the Nine Mile pool. Currently, sediment is deposited in the upper reach of the Nine Mile pool up to Seven Mile Bridge. When the 10 feet of flashboards are removed or blown out (to elevation 1,596.6 feet), gradient and velocities in the upper reach increase, reducing sediment deposition. If the pool is maintained 10 feet higher during this period (at elevation 1,606.6 feet), it is possible that the area of deposition will increase.

Near the Nine Mile Dam site, sediment buildup on the inside bar is pushing the thalweg to the opposite (west) side of the bend (NHC, 1999), causing some undercutting of the bank. Downstream of Nine Mile Development, future sediment deposition is expected to occur mainly within 1 to 8 miles from the dam (Golder, 2005b). In the next 30 to 50 years of operation, bed level changes in the upper portions of Lake Spokane could increase.

In SRP-TR-1, Avista focuses on Hangman Creek as the source of new sediments to the system. That effort would contribute to reducing the new sediment load; however, the resources allocated to sediment reduction in Hangman Creek is a small fraction of the resources associated with that PME.

The WDOE's July 17, 2006, filing claims that the PDEA discussion on sediment does not lead to concise statements of effects. The WDOE estimates that during the next 50 years, the deepest point of the river channel downstream of the Nine Mile Development will decrease in depth by 2 to 4 feet due to sediment deposition and that sediments trapped by the developments have the potential to impact water quality.

In the staff's opinion, Project operations store, transport, and control new sediments supplied to the system (and also years of sediments stored within the system). Sediment transport and deposition within the system also has implications for fish and benthic organisms.

The staff agrees with the need for additional measures (see Table 5.2-1, item 25) and proposes that Avista develop a Sediment Management Plan for the Nine Mile and Long Lake Reservoirs (including the two related Project developments). This plan should address sediment transport (or the lack thereof) and the impacts to the river system; sediment characterization; a process for regular monitoring of sediments trapped by the developments; and a plan for final disposition of sediments. The plan should document current deposition and

transport rates and patterns in the reservoirs, including the effect of the dams on how sediment is stored in the reach (Table 5.2-1, item 25).

### **Spokane River Dissolved Oxygen**

As part of the Washington Water Quality PME (SRP-WQ-2), Avista proposed to conduct a feasibility study to identify potential mechanisms for increasing DO in Long Lake Development discharge and implementing reasonable and feasible measures, such as changes in Project operations or physical structures, that would improve DO levels downstream of Long Lake Dam. Monitoring and enhancement of DO levels downstream of Long Lake Dam would improve conditions for aquatic resources in the lower Spokane River. We estimate that the cost of the feasibility study would be \$50,000; however, the cost of implementation, monitoring, and reporting is unknown. We conclude that the benefits of implementing this program would be worth the cost and we recommend that this measure be included in any license that is issued for the Spokane River Developments. However, because this measure is packaged as part of SRP-WQ-2 with other measures that are unrelated to the effects of the Spokane River Developments,<sup>10</sup> we do not recommend that SRP-WQ-2 be included in any license that is issued for the Spokane River Developments. Instead, we recommend that Avista develop and implement a separate Long Lake Oxygen Monitoring and Enhancement Plan. This plan would incorporate the components of SRP-WQ-2 that address DO conditions at Long Lake Development.

The Sierra Club's July 17, 2006, filing and the Lands Council's July 17, 2006, filing proposed that Avista undertake projects to improve DO in Long Lake Reservoir and downstream. They suggest that to address DO conditions upstream of Long Lake Dam, Avista should fund projects to address Avista's contribution to the DO problem in the Spokane River and fund and implement a feasibility study of an in-reservoir aeration/oxygenation system, operational changes, and non-point source nutrient management to improve DO levels. They indicate that Avista should quantify the potential benefits of these projects, conduct DO monitoring in Long Lake Reservoir, report results to WDOE, and seek funding partners.

Our analysis suggests that low DO conditions in Long Lake Reservoir are primarily caused by nutrient loading into Long Lake Reservoir. While operation of Long Lake Dam may influence the release of waters with low DO levels to downstream areas in the Spokane River, we have no evidence to indicate that operation of the Long Lake Dam influences oxygen levels within the reservoir. The cost of the measures recommended by Sierra Club and the Lands Council to

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<sup>10</sup> SRP-WQ-2 includes water quality monitoring in the Spokane River downstream of Post Falls Dam and upstream of the effects of the Spokane River Developments. The upstream monitoring is related to the effects of the Post Falls Project and is unrelated to the operation and effects of the Spokane River Developments; therefore, we address the need for this monitoring in section 5.1.1 above.

address oxygen levels upstream of Long Lake Dam are unknown but are likely high. Because these measures are not related to operation of the Long Lake Dam or operation of the other Spokane River Developments, we conclude that they have no nexus to the Project and we do not recommend including them in any license that is issued for the Spokane River Developments.

To address DO levels downstream of Long Lake Dam, the Sierra Club and the Lands Council recommend that Avista conduct real-time monitoring of DO in the forebay and tailwater of Long Lake Dam and aerate/oxygenate forebay water or discharge flows. As part of the Long Lake Oxygen Monitoring and Enhancement Plan that we recommend above, Avista would monitor DO in discharge from Long Lake Dam and study the feasibility of improving DO levels downstream of Long Lake Dam. While this measure would focus on the tailwater area, rather than the Long Lake Dam forebay, we conclude that implementation of a Long Lake Oxygen Monitoring and Enhancement Plan would address the Sierra Club's and Lands Council's recommendations to monitor and study the feasibility of improving dissolved gas levels in waters downstream of Long Lake Dam.

As part of the Long Lake Oxygen Monitoring and Enhancement Plan that we recommend above, Avista would study the feasibility of improving DO conditions below Long Lake Dam for 2 years, implement any selected measures for improving DO in year 3, and file the monitoring results in year 5. In a letter filed on July 17, 2006, CELP indicated that 2 years is inadequate to understand and gage the success of any enhancements and recommended that the program continue until year 10 of the license. While not specifically stated, it appears that CELP is recommending that Avista conduct 7 years of monitoring after implementation of any measures in year 3.

We would expect that the success of any physical structures or operational measures to improve DO conditions would be readily apparent and would not require more than 2 years of monitoring to determine the success of the measures. However, other measures, such as reduction or control of nutrients entering Long Lake Reservoir, could take longer to affect DO levels. While our analysis indicates that operation of the Project does not influence nutrient input to the Spokane River system, measures to control or reduce nutrient inputs could ultimately be selected by Avista as a cost-effective approach to improving DO conditions downstream of Long Lake Dam. Therefore, we recommend that the Long Lake Oxygen Monitoring and Enhancement Plan include provisions to extend the post-implementation monitoring period under circumstances where effects of the program on DO levels may be delayed more than 2 years.

In comments filed on July 17, 2006, CELP stated that \$50,000 is insufficient to provide adequate funding for a feasibility study to improve DO levels downstream of Long Lake Development. In the discussion above, the staff

recommends implementing the measures and study proposed by Avista for addressing DO conditions at Long Lake Dam, and we use Avista's proposed funding levels to estimate costs for our economic analysis. However, by using these cost estimates, we are not establishing or recommending spending limits on Avista's responsibilities to conduct the recommended program. The Commission cannot constrain the fulfillment of its statutory responsibilities by agreeing to spending limits. The \$50,000 figure associated with the recommended program should be viewed as an estimate of the cost for the study, rather than a spending limit. Based on available information, we find no need to increase the amount of this estimate.

### **Spokane River Water Quality Monitoring Station**

The Sierra Club recommends that Avista install water quality monitoring stations on the Spokane River upstream and downstream of Long Lake Dam. The Sierra Club indicates that these stations would monitor discharge and would be installed to determine attainment or nonattainment of standards for water temperature, TDG, DO, and turbidity. While a specific schedule is not specifically stated in its filing, we assume that the Sierra Club's recommendation includes monitoring during each year of any license issued for the Spokane River Developments. We estimate that the cost of each station would be approximately \$52,300 per year.

Our analysis indicates that Project operations can affect TDG in the Spokane River downstream of Long Lake Dam. Elsewhere in this section, we are recommending that Avista implement the Total Dissolved Gas Control and Mitigation Program (SRP-WQ-1) to monitor Project effects on TDG during the initial years of any license. Additionally, we are recommending the Avista implement a Long Lake Oxygen Monitoring and Enhancement Plan that would include monitoring DO downstream of Long Lake Dam. Both of these recommended measures would require monitoring of water temperatures, since TDG and DO levels are affected by water temperatures. With regard to monitoring turbidity, we have no evidence that turbidity levels in the lower Spokane River are related to operation of Long Lake Dam. Based on this information, we conclude that Sierra Club's proposed monitoring stations for water temperature, TDG, and DO would not be worth the cost, and we have no evidence to support monitoring turbidity. We do not recommend including these monitoring stations as a requirement of any license that is issued for the Project.

### **Spokane River TDG**

The Sierra Club and the Lands Council recommend that Avista monitor TDG and implement operational measures to minimize TDG increases downstream of the Spokane River Developments. These measures are included in

Avista's proposal, and we are recommending that they be included in any license issued for the Spokane River Developments. However, the Sierra Club and the Lands Council also recommend that Avista be required to develop a compensation program to address the losses of aquatic biota when TDG attainment would not be possible. The Sierra Club and the Lands Council indicate that elevated TDG can result in harm to aquatic organisms and that levels above 110 percent saturation have been recorded downstream of the Spokane River Developments.

The Sierra Club and the Lands Council do not provide any evidence documenting or quantifying harm to aquatic organisms downstream of the Spokane River Developments. Additionally, they do not specify how Avista should quantify harm that may occur during periods of elevated TDG. Finally, neither group provides any information to describe the form of compensation Avista should provide. Without more specific information, we are unable to assess the environmental and economic effects of this recommendation and we cannot recommend it. Additionally, because the staff-recommended measures would improve TDG conditions downstream of the Spokane River Developments and the FPA does not impose a no-net-loss requirement,<sup>11</sup> we do not recommend including this measure in any license that is issued for the Spokane River Developments.

### **Modifications to Long Lake Dam to Reduce TDG**

The Sierra Club and the Lands Council recommend that Avista install deflectors (flip-lip-like devices) or make other modifications to Long Lake Dam to minimize the deep plunge of water immediately downstream of the dam. Modifying Long Lake Dam to reduce the plunge depth of spilled flows may limit increases in TDG at Long Lake Dam; however, without additional information, we are unable to assess the environmental or economic effects of such modifications or recommend a specific modification. Avista proposes to monitor TDG and implement operational measures to minimize TDG increases downstream of the Spokane River Developments, and we recommend implementation of this program as part of any license issued for these developments. Monitoring and testing would provide information useful in assessing the potential benefits of various modifications to Long Lake Dam. However, because the Sierra Club and the Lands Council did not provide any evidence to support a specific modification, and because available information is inadequate to evaluate or select a potential modification, we do not recommend including this measure in any license that is issued for these developments.

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<sup>11</sup> See, e.g., *Ohio Power*, 71 FERC ¶ 61,092 (1995) and *Indiana Michigan Power Co.*, 82 FERC ¶ 61,247 (1998).

## **Spokane River Project Erosion Control and Habitat Protection**

The USFWS recommends that Avista develop and implement an Upland Habitat Protection and Enhancement Plan. In this plan, the USFWS recommends that Avista identify areas at Lake Spokane where lakeshore protection may control erosion and protect upland habitat, including at least 24 acres of upland habitat adjacent to the lake. The USFWS recommends that the plan include enhancement activities for developing older and larger trees for cavity nesters, bald eagle nest and perch trees, shrubs to provide cover and forage for big game, nesting habitat for migratory birds, and overall habitat diversity. The USFWS recommends that Avista submit an annual report to the USFWS and WDFW describing Avista's progress implementing this recommendation.

The USFWS says its recommended Upland Habitat Protection and Enhancement Plan is needed because portions of the steep slopes on the lower end of Lake Spokane are actively eroding due to Project-related lake level changes, wind, and boat wave action. The USFWS says some of these upland areas adjacent to Lake Spokane are not able to support vegetation due to their slope, soil, and aspect, and therefore have reduced value for upland wildlife. Further, the USFWS says shoreline erosion caused by lake level fluctuations has resulted in a loss of large conifer trees, thus decreasing bald eagle nesting and foraging habitat. The USFWS estimates that steep slopes with limited vegetation cover a total of 24 acres along about 40 miles of Lake Spokane's shoreline.

Avista, in its September 1, 2006, reply, recommends that the Commission reject this recommendation, saying studies conducted in support of the application found that Project operations are not the direct cause of erosion along Lake Spokane's shoreline. Further, Avista asserts that the steep slopes referred to by the USFWS are naturally susceptible to erosion and that historic photos of the area show that more vegetation exists on these slopes now than in the 1950s.

Given the relatively stable lake levels at Lake Spokane and the naturally steep slopes that exist adjacent to the lake, it appears that lakeshore erosion and any ongoing loss of shoreline trees and vegetation are unrelated to Project operations. Considering this finding, and considering the fact that Avista would protect additional areas of shoreline habitat (an estimated 47 acres of wetlands and 320 acres of shoreline) under proposed measure SRP-TR-1, we do not recommend the USFWS's Upland Habitat Protection and Enhancement Plan.

In its section 10(j) recommendations filed July 17, 2006, WDFW recommends that Avista include all of the lands it owns in the vicinity of Lake Spokane (about 1,976 acres) within the Project boundary and manage these lands for wildlife during the term of the license. WDFW recommends preserving these lands from future development and enhancing these lands for wildlife using forest

management practices, tree and shrub plantings, weed control, snag enhancements, and shoreline protection and enhancement measures. WDFW recommends that Avista develop plans for wildlife habitat management and provide \$30,000 or \$15/acre annually for habitat maintenance and enhancement activities. The WDFW also recommends that Avista provide an unspecified amount of funds to purchase about 300 acres of shoreline property and wetland habitat that is contiguous with Lake Spokane or other Avista-owned property. WDFW recommends that Avista provide \$75/acre annually to manage and enhance these 300 acres by tree and shrub plantings, snag enhancement, and other activities for increasing wetland diversity and function.

WDFW says its recommended protection of all Avista-owned lands in the vicinity of Lake Spokane (about 1,976 acres) is needed because (1) about 5,060 acres of terrestrial/riverine habitat were originally inundated by construction of the Project; (2) continued Project operations, including lake level fluctuations, have limited floodplain development, riparian habitat diversity, wildlife foraging opportunities and wildlife migration along and across the river and have increased recreation, thus affecting wildlife use; (3) surrounding land-use practices have led to the conversion, loss, and degradation of significant tracts of land due to clear-cuts, agriculture, hobby farms, cattle grazing, residential development, and road construction; and (4) the remaining 1,976 acres of Avista-owned land include some of the most significant wildlife habitat remaining around Lake Spokane and are needed because they provide large parcels of interior forest habitat and other habitat features that are becoming limited in the Project area.

WDFW also says its recommendation that Avista purchase about 300 acres of land contiguous with Lake Spokane or other Avista-owned property is needed because (1) inundation and sedimentation have created additional shallow water habitat and have expanded aquatic bed vegetation in the lake; (2) the replacement of flashboards with a rubber dam at Nine Mile Development would permit Avista to refill the reservoir earlier and would alter, displace, and eliminate forested and scrub-shrub wetlands along the shoreline; (3) non-native plants have reduced the function and diversity of most wetland habitat in Lake Spokane; and (4) wetlands provide important habitat for wildlife protection, nesting, feeding, and movement, and wetlands are increasingly becoming scarce due to development in the Lake Spokane vicinity.

In its September 1, 2006, reply, Avista recommends that the Commission reject WDFW's recommendations to protect all Avista-owned land (about 1,976 acres) and to purchase about 300 acres of land in the vicinity of Lake Spokane. Avista says WDFW's justification is based either upon a pre-Project baseline or upon effects that have no nexus to the Project.

We agree that most effects cited by WDFW are based on a pre-Project baseline or are the result of actions by third parties that are unrelated to the Project. However, we disagree with Avista about the effects of its proposed rubber dam at Nine Mile Development. As discussed in section 3.3.5.2.1, replacing flashboards with a rubber dam would result in altered water levels during the spring and summer growing seasons that could adversely affect wetlands. In an October 14, 2005, filing, Avista estimates that up to 6 acres of wetlands could be affected by a more stable pool elevation throughout the year, as compared to a variable pool elevation that occurs as a result of flashboard removal and replacement. Avista proposes to acquire about 47 acres of wetlands at Lake Spokane, which would mitigate the adverse effects of losing up to 6 acres of habitat due to the rubber dam at Nine Mile Development. However, to ensure that the proposed rubber dam did not result in a net loss of wetlands at the Spokane River Developments, we recommend that Avista include in its proposed measure under SRP-TR-1 a provision to monitor wetlands after the rubber dam has been installed and to mitigate for any vegetated wetland habitat lost in excess of that habitat acquired and/or enhanced under SRP-TR-1.

The Lands Council, in its July 17, 2006, comments, recommends that Avista implement a program to identify and acquire available riparian properties, implement erosion control measures, and develop protective easements on all Avista-owned shorelines on Long Lake Reservoir. The Lands Council also recommends the establishment of a habitat mitigation trust fund. The Sierra Club, in its July 14, 2006, comments, recommends that Avista implement measures to prevent or reduce erosion on Lake Spokane, which includes identifying and acquiring available riparian properties, implementing erosion control measures, and developing protective easements. The Sierra Club also recommends the establishment of a mitigation trust fund.

We do not recommend the above measures because it appears that lakeshore erosion and any ongoing loss of shoreline trees and vegetation is unrelated to Project operations. Further, Avista already proposes to acquire about 47 acres of wetlands and to add about 320 acres of shorelands to the Project boundary under SRP-TR-1. Implementing Avista's proposed measures under SRP-TR-1 would provide adequate enhancement of Project resources.

### **Bald Eagle Surveys, Monitoring, Management, and Education**

In its section 10(j) recommendations filed July 18, 2006, the USFWS makes several recommendations to protect bald eagles at both the Spokane River Developments and the Post Falls Project. For the same reasons discussed earlier for the Post Falls Project (see section 5.1.1.3), we recommend that Avista's bald eagle surveys, monitoring, and Nest Management Plans at the Spokane River Developments be focused on lands within the Project boundary. We also

recommend that Avista incorporate into its Spokane River Public Outreach Plan, to be developed under SRP-REC-3, provisions that implement the USFWS's recommended Bald Eagle Educational and Interpretive Program. We estimate that such provisions would cost \$6,200 annually. We find that the benefits of these provisions would justify the costs.

### **Control of Noxious Weeds**

In its section 10(j) recommendations filed July 18, 2006, the USFWS recommends that Avista survey Project lands for noxious weeds and develop a Noxious Weed Management Plan for the Spokane River Developments. Again, for the same reasons discussed earlier for the Post Falls Project, we recommend that Avista incorporate into its Spokane River Developments Land Use Management Plan, to be developed under SRP-LU-1, provisions that implement the USFWS's recommended Noxious Weed Management Program. These provisions should include both monitoring and control measures and should require that an annual monitoring report be filed with USFWS, WDFW, and the Commission. We estimate that these provisions would cost \$11,200 annually. We find that the benefits of these provisions would justify the costs.

### **Recreation Resources**

Avista proposes to implement a recreation plan for the Spokane River Developments (SRP-REC-1), which we discuss in section 3.3.8. In this section, we discuss Avista's Spokane River Developments proposed PME measures for recreation as identified in Appendix B of its Proposed Action, SRP-REC-1 to SRP-REC-4.

We recommend Avista's recreation measures for the Spokane River Developments in part only, because the proposed recreation plan primarily focuses on partnering with certain entities and providing funds (cost-share). Some of the recreation sites are located within the existing Spokane River Developments boundary (e.g., Long Lake Dam overlook, Long Lake Dam river access, and Huntington Park). Other sites (e.g., up to 10 boat-in-only semi-primitive campsites) are outside the existing boundary. The recreation plan identifies Avista's proposal to remove land occupied by the Nine Mile cottages; however, the plan does not specify the estimated acres for removal. Based on the best available information, we find that certain recreation sites are not needed for Project purposes, which we discuss herein.

For those recreation sites that currently lie outside the Spokane River Developments boundary, we determined, based on the record, that certain recreation sites would enable the public to better use Project lands and waters and would serve a Project purpose, and that the land occupied by such sites should

therefore be brought into the Spokane River Developments boundary. We discuss our findings below.

### *Spokane River Recreation*

Under the Spokane River Recreation (SRP-REC-2) PME measure, Avista proposes to cooperate with various entities to develop a Water Avenue access site. Avista states that the preferred location for the access site is at the west end of Water Avenue near its intersection with Ash Street. Avista would provide funds (not to exceed \$20,000) for site development and would enter into a separate agreement with the City of Spokane to provide \$5,000 annually to supplement its O&M.

As stated in the Commission's *Policy Statement on Hydropower Licensing Settlements*, it is important that the parties base proposed recreation measures on record evidence supporting the need for the proposed facilities and that they link the measures to the Project. Neither Avista's PDEA nor the PME (SRP-REC-2) for the Project clearly explains how the proposed Water Avenue access site would be used in connection with the Project or demonstrates the need for the facility. The Louis Berger Group (2004a) did not identify the site, and we could not find any Project-related recreational use data for the area. Although Avista refers to the site as "preferred", there is an ambiguity because the measure also identifies Spokane Parks and Recreation Department as owning and managing the site; yet, it is unclear as to the current site amenities. We do not recommend Avista's proposal to develop a Water Avenue access site because there is not a nexus between the Project and the site. We therefore do not recommend the measure as a requirement in any license issued for the Project.

### *Centennial Trail Extension*

Avista proposes to improve pedestrian/bicycle access to Lake Spokane by extending the Centennial Trail approximately 1 mile from Sontag Park to the Nine Mile Resort. In so doing, Avista would cooperate with WSPRC and the Friends of the Centennial Trail and provide funds (not to exceed \$100,000) for trail development, as stipulated under the Proposed Action (SRP-REC-4). Currently, the trail ends at Sontag Park near Nine Mile Development.

As discussed in section 3.3.8, a high level of participation (more than 50 percent) occurs in on-shore activities, such as hiking and wildlife viewing, at the Nine Mile Reservoir shoreline (Louis Berger Group, 2004a). Extending the Centennial Trail would connect the trail with the Nine Mile Development and enhance public access to Project lands and waters. Consequently, the approximate 1-mile-long segment of the Centennial Trail would enable the public to better use Project lands and waters and would serve a Project purpose; therefore, the trail segment should be made a Project facility. We recommend that this segment of the

Centennial Trail, as identified above, be brought into the Spokane River Development boundary. We recommend that Avista improve the approximate 1-mile-long segment of the Centennial Trail, as proposed, and that Avista be responsible for implementation. The trail would be a component of our recommended final recreation plan. We find that the benefits of this measure would justify the costs.

#### *Boat-in-only Campgrounds*

Avista proposes to cooperate with WSPRC and WDNR to identify and develop up to 10 boat-in-only semi-primitive campsites on Lake Spokane (SRP-REC-4). Avista proposes to consult with WDFW to minimize impacts on terrestrial resources during the development of these sites. Avista would provide funding (not to exceed \$50,000) for site development and \$10,000 annually for O&M.

Based on the best available information, we find that a nexus exists between the Spokane River Developments and the proposed 10 boat-in-only semi-primitive campsites on Lake Spokane. We find that these campsites are needed for Project purposes because the sites would provide additional needed access for boaters; therefore, the land occupied by the campsites should be brought into the Spokane River Developments boundary. We recommend that Avista include a provision for identifying and developing up to 10 boat-in-only semi-primitive campsites in our recommended final recreation plan. Signage at the campsites should identify them as part of the Spokane River Developments. We find the benefits of this measure would justify the costs.

#### *Nine Mile Resort*

Under the Proposed Action (SRP-REC-4), Avista would cooperate with the WSPRC to reconfigure Nine Mile Resort as a day-use area that would complement the WSPRC's proposed new campground at Riverside State Park. Riverside State Park was developed in 1982 through the LWCF (see section 5.4.5). The measure would provide new recreational opportunities, including public access sites to Project waters. Under the Proposed Action, Avista would retain ownership of the resort property, but would either manage the property with a concessionaire or enter into a management agreement with the WSPRC. Avista proposes to provide \$250,000 for the measure.

As discussed in section 3.3.8, Nine Mile Resort is at capacity during the summer season. Avista states that the proposed measure, when coupled with the WSPRC's new campground at Riverside State Park, would substantially expand recreational opportunities at the upstream end of Spokane Lake. Based on our cumulative effects analysis, we find that Nine Mile Resort offers public recreational use of Project waters and that providing day-use facilities would have

an indirect beneficial effect on the adjacent Riverside State Park. We conclude that the Nine Mile Resort should be made a Project facility and we recommend that Nine Mile Resort be brought into the Project boundary.

In light of our findings, we recommend that Avista develop and, upon Commission approval, implement a final recreation plan for the Spokane River Developments. The plan, at a minimum, should provide one or more maps that clearly identify all Project-related recreation sites, including those identified above by the staff to be included within the Spokane River Developments boundary. For the Project, we identify, at a minimum, those facilities as Huntington Park; Nine Mile/Spokane House; Nine Mile Portage; an approximate 1-mile-long section of Centennial Trail (from Sontag Park to the Nine Mile Resort); Nine Mile Resort; relocation of the Nine Mile Dam overlook to accommodate disabled individuals; up to 10 boat-in-only semi-primitive campsites on Lake Spokane; Long Lake Dam overlook; and Long Lake Dam river access site.

The final recreation plan should also discuss the following: (1) specific measures to improve recreation sites or public access to the sites; (2) signage; (3) soil erosion and sediment control measures where ground-disturbing activities are proposed; (4) periodic monitoring and site clean-up at the recreation sites, or assessment and implementation of a “carry-in/carry-out” policy for the public to carry out their trash; (5) the process for considering the needs of the disabled in the design of each facility; (6) an implementation schedule, including construction; (7) cost estimates and schematic drawings of the facilities; and (8) documentation of consultation with the WSPRC, WDNR, WDFW, NPS, Spokane County, Stevens County, and Friends of the Centennial Trail and specific descriptions of how the agencies’ comments and recommendations are accommodated by the plan.

The final recreation plan should be developed in concert with the staff-recommended Lake Spokane Weed Management Plan.

Under the Staff Alternative, the cost for developing and implementing a final recreation plan for the Spokane River Developments, including the extension of the Project boundary to include land occupied by an existing recreation facility, is unknown. We find that our recommended recreation measures for inclusion within a final recreation plan would significantly benefit the public.

We do not recommend Avista’s proposals for cooperating with (1) WSPRC and WDFW to provide parking, hiking, and watchable-wildlife opportunities at Devil’s Gap Trailhead and the surrounding area, including a funding provision for \$5,000 annually for O&M; and (2) WDNR to expand camping at its Lake Spokane Campground, including a funding provision of \$140,000 for site development. Avista and the resource agencies did not clearly demonstrate why the proposed

measure is generally worthwhile and how the measure is linked to the effects and purposes of the Project. Although we found a reference to Long Lake Campground in the Louis Berger Group survey (2004a), we are unsure whether this is the same campground identified in the Proposed Action as the Lake Spokane Campground. Survey results did not identify Devil's Gap Trailhead.

In any case, these measures do not include enough detail to allow the staff to assess their potential benefits. For these reasons, we have no justification for recommending that such provisions be included as a requirement in any license issued for the Project. Avista and the agencies, however, are free to enter into an off-license agreement for the sites.

### **Land Use and Management**

Avista proposes to implement a Land Use Management Plan for the Spokane River Developments (SRP-LU-1). As discussed in section 3.3.9, Avista filed on March 21, 2006, its draft Land Use Management Plan, dated February 2005, for the Spokane River Developments. In the measure, Avista would provide financial support, which we discuss herein under *Other Measures/Funds*.

Because we recommend that certain lands occupied by a recreation site be brought into the Spokane River Developments boundary and because the lands need to be managed, we recommend that Avista develop and implement a final Land Use Management Plan that clearly identifies, on one or more maps, those lands and associated acres. The plan should identify, on one or more maps, Avista's proposal for adding 350.1 acres and removing 68.8 acres from within the Project boundary. Avista should also specify the removal of the land occupied by the Nine Mile Cottages.<sup>12</sup> The plan, at a minimum, should contain a table that identifies land use categories and associated acres, a buffer zone, specific programs, implementation, and an update. The Land Use Management Plan should be developed in concert with the staff-recommended plan for terrestrial resources in order to take into account noxious weeds and measures to control and/or eradicate such species.

Furthermore, in the Louis Berger Group survey (2004a) and identified as LS-09 (Riverside State Park - Boat Launch and Canoe Take-Out), our GIS analysis indicates that Avista's 2005 existing boundary for the Nine Mile Development is incorrect. The existing boundary shows a connected waterway, but the GIS indicates that the area is a peninsula and not connected. If a license were issued for the Spokane River Developments, we recommend that Avista

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<sup>12</sup> These cottages are historic properties; thus, removal from Commission jurisdiction would require Avista to consult with the Washington SHPO on a plan to ensure continued protection of these historic properties. Provisions for this would be included in Avista's HPMP.

modify its existing Nine Mile Development boundary to accurately reflect the Project boundary.

### **Aesthetic Flows**

We do not recommend the Sierra Club/Center for Environmental Justice's (Sierra Club) recommendation that Avista (1) extend the hours to release aesthetic flow for the Upper Falls Development to a 5 a.m.-to-midnight schedule, and (2) provide 500-cfs aesthetic flow for the Upper Falls Development if stream channel modification is not feasible.

In section 3.3.10.2, we find that the majority of people view the Upper Falls between noon and 7 p.m. This timeframe is within the timeframe of 10 a.m. until one hour after sunset proposed by Avista. In Chapter 4.0, Table 4.3-2, we find that extending the hours as proposed by the Sierra Club would double the operational cost from \$65,400 per year to \$130,800. Also in Table 4.3-2, we find that increasing the aesthetic flow from 200 cfs to 500 cfs would double the annual loss of electrical generation to 1,380 MWh. We find the incremental aesthetic effects that would be achieved by the Sierra Club's additional flow release and extended hours is not worth the costs and therefore would not be in the public interest.

The Sierra Club recommended that Avista conduct a feasibility study of altering the north channel of Upper Falls to spread water across the entire width of the channel and eliminate the current channelization. Avista has proposed to study the feasibility of modifying the existing channels. The goal of both proposals is the same: to enhance visual conditions. We recommend that Avista conduct its feasibility study. Such a study would be in the public interest.

### **Other Measures/Funds**

Under the Proposed Action, Avista proposes to provide financial support for enforcement of land- and water-based laws and regulations administered by federal, state, and local governmental entities. The entities would apply to Avista for funds prior to an annual spring meeting in order to allow Avista and the entities to evaluate their proposals.

Avista also proposes to (1) purchase and maintain a boat to support PME measures (total cost to be shared 50/50 with the Post Falls Project); (2) support office staff time and expenses associated with new PME measures; (3) provide for administrative overhead costs for new PME measures; and (4) provide funds to ensure continued public access and to develop new and/or reconstructed recreation projects on or adjacent to the Project.

WDOE contends that the 23 miles of shoreline along Lake Spokane (in Spokane and Stevens counties) have been subject to residential subdivision since

before the passage of the Washington State Shoreline Management Act. The act regulates development along shorelines and is intended to provide for coordinated management of shoreline resources. WDOE recommends that Avista contribute resources or funds necessary for Spokane and Stevens counties to enforce shoreline development regulations along Lake Spokane and the Spokane River.

For our findings on these issues, see our discussion in Post Falls Project section 5.1.1.3, subsection *Other Measures/Funds*. The conclusions drawn in that section also apply for the Spokane River Developments. In short, we do not recommend that such provisions be included as a requirement in any license issued for the Project.

## **5.2 SUMMARY OF SECTION 10(J) RECOMMENDATIONS AND 4(E) CONDITIONS**

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 PME of fish and wildlife resources affected by the Project.

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

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 July 17, 2006, IDFG filed section 10(j) recommendations for the Projects. The USFWS<sup>13</sup> and WDFW filed section 10(j) recommendations on July 18, 2006. 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 agency shall attempt to resolve any such inconsistency, giving due weight to the recommendations, expertise, and statutory responsibilities of such agency.

Table 5.2-1 summarizes federal and state recommendations and our conclusions on whether the recommendations are within the scope of section 10(j). The table also states whether 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.

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<sup>13</sup> Interior filed these recommendations on behalf of USFWS.

**Table 5.2-1. Fish and wildlife agency recommendations**

| <b>Recommendation<br/>(Applicable Projects)<sup>a</sup></b>   | <b>Agency</b>  | <b>Within the scope of 10(j)?</b>   | <b>Total Levelized<br/>Annual Cost<br/>(2007\$)</b> | <b>Conclusion</b>  |
|---|----------------|---|---|--|
| 1. Maintain 600-cfs minimum flow release at Post Falls Dam with allowances for 500 cfs during July 1 – Sept 15 of each year (PF).             | IDFG           | Yes.  | \$20,300 (loss in energy)                           | Adopt.   |
| 2. Maintain 600-cfs minimum flow release at Post Falls Dam with adaptive management for initial 5 years (PF).                                 | WDFW           | No. WDFW is not in charge of fish and wildlife resources in Idaho, where Post Falls Project is located. | \$26,200 (loss in energy)                           | Adopt in part; the staff alternative does not include provisions for adaptive management.      |
| 3. Provide spring flows for trout incubation at Post Falls Dam (PF).  | WDFW           | No. WDFW is not in charge of fish and wildlife resources in Idaho, where Post Falls Project is located. | Indeterminate                                       | Not adopt. We find that the benefits would not justify the adverse effects on lake recreation. |
| 4. Operate Post Falls Project to comply with Upper Spokane Rainbow Trout Spawning Fry Emergence Protection Plan (PF).                         | IDFG           | Yes.  | Included in Avista’s proposal                       | Adopt.   |
| 5. Operate Post Falls Dam to follow a downramping rate that does not exceed more than a 4-inch-per-hour drop in downstream water levels (PF). | IDFG,<br>USFWS | Yes.  | Included in Avista’s proposal                       | Adopt.   |

**Table 5.2-1. Fish and wildlife agency recommendations (continued)**

| <b>Recommendation<br/>(Applicable Projects)<sup>a</sup></b>   | <b>Agency</b> | <b>Within the scope of 10(j)?</b>  | <b>Total Levelized<br/>Annual Cost<br/>(2007\$)</b> | <b>Conclusion</b>  |
|---|---------------|--|---|--|
| 6. Operate Post Falls Dam to follow a downramping rate that does not exceed more than a 2-inch-per-hour drop in downstream water levels (PF).   | WDFW          | No. WDFW is not considered a 10(j) agency for Post Falls Project because the Project is located in the State of Idaho. 18 CFR § 4.30(b)(9)(i) defines a state agency as the agency in charge of administrative management over the fish and wildlife resources in the state in which a proposed hydropower project is located. In this case, the state 10(j) agency is IDFG. | Indeterminate                                       | Not adopt. The benefits would not justify the substantial costs to upgrade the facility to provide the recommended ramping rate. |
| 7. Maintain summer Coeur d'Alene Lake levels at or near 2,218 feet through September 15 (PF).   | IDFG          | Yes.   | Included in Avista's proposal                       | Adopt.   |
| 8. Provide aesthetic flows at Post Falls through the north channel spillway (PF).   | IDFG          | No. Not a specific measure to protect fish and wildlife.   | \$\$12,100  | Adopt.   |
| 9. Implement PF-TR-1 (Coeur d'Alene Lake and Tributary Erosion Control and Wetland and Riparian Habitat Protection and Enhancement Plan) with modifications: (1) restore 532 acres of PFO1, and (2) restore 250 acres of PSS wetlands (PF). | USFWS         | No. No nexus to Project effects.   | \$431,800   | Not adopt. Because of the lack of a nexus to the Project, we have no justification for recommending the measure.                 |

**Table 5.2-1. Fish and wildlife agency recommendations (continued)**

| <b>Recommendation<br/>(Applicable Projects)<sup>a</sup></b>  | <b>Agency</b> | <b>Within the scope of 10(j)?</b>                       | <b>Total Levelized<br/>Annual Cost<br/>(2007\$)</b> | <b>Conclusion</b>   |
|--|---------------|---|---|---|
| 10. Implement PF-TR-1 (Coeur d'Alene Lake and Tributary Erosion Control and Wetland and Riparian Habitat Protection and Enhancement Plan) with modifications: (1) unused funds accumulate, (2) prioritize sites independent of cultural resources, (3) allocate funds for erosion vs. wetlands, and (4) modify project selection process (PF). | IDFG          | No. Not specific measures to protect fish and wildlife. | \$0   | Not adopt. We recommend specific measures instead of funds. Further, the remaining recommendations would be less effective in prioritizing sites. |
| 11. Implement PF-TR-1 (Coeur d'Alene Lake and Tributary Erosion Control and Wetland and Riparian Habitat Protection and Enhancement Plan) with modifications: (1) priority given to natural levees in lower St. Joe River, excluding areas covered by other USFWS recommendations (PF).  | USFWS         | Yes.  | \$0   | Adopt.  |

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**Table 5.2-1. Fish and wildlife agency recommendations (continued)**

| Recommendation<br>(Applicable Projects) <sup>a</sup>  | Agency | Within the scope of 10(j)?  | Total Levelized<br>Annual Cost<br>(2007\$)                            | Conclusion   |
|---|--------|---|---|--|
| 12. Implement Post Falls Fish Protection, Mitigation, and Enhancement Program, but with different allocations of funds and priorities (PF).   | IDFG   | No. Not a specific measure to protect fish and wildlife.  | \$255,000   | Not adopt. The recommendation is too broad and open-ended to adequately assess the benefits of establishing and implementing the program. The recommended program also provides for law enforcement, which is not a matter of Commission jurisdiction.           |
| 13. Develop and implement a Migration Corridor and Tributary Restoration Plan addressing 33 miles of the St. Joe River upstream from the upper extent of the Project to mitigate for tributaries inundated by the Project (PF). | USFWS  | No. The recommended plan is very general and uncertain with respect to the types of fish and wildlife measures and locations where Avista would implement such measures; therefore, the recommendation is not a specific fish and wildlife measure. The plan also contemplates the removal of non-Project culverts and other structures with no nexus to the Project. | \$3,000 plus the cost of as yet unidentified measures (indeterminate) | Not adopt. We find that the restoration measures contemplated by the plan would likely be ineffective, because other factors (e.g., degraded water quality) would continue to occur in the tributaries, so the benefits of the plan would not justify the costs. |

**Table 5.2-1. Fish and wildlife agency recommendations (continued)**

| <b>Recommendation<br/>(Applicable Projects)<sup>a</sup></b>   | <b>Agency</b> | <b>Within the scope of 10(j)?</b>                        | <b>Total Levelized<br/>Annual Cost<br/>(2007\$)</b> | <b>Conclusion</b>   |
|---|---------------|--|---|---|
| 14. Implement Coeur d’Alene Lake Aquatic Weed Management Program (PF).  | IDFG          | No. Not a specific measure to protect fish and wildlife. | \$50,000  | Adopt. However, we recommend that Avista be fully responsible for implementing all weed management measures rather than funding a third party to do so. We also recommend that Avista carry out all weed management actions specified in a Commission-approved plan, notwithstanding Avista’s proposed spending caps. |
| 15. Implement PF-TR-1 (Coeur d’Alene Lake and Tributary Erosion Control and Wetland and Riparian Habitat Protection and Enhancement Plan) with modifications: (1) restore 445 acres of PFO1 wetlands, and (2) restore 49 acres of PSS wetlands in lower St. Joe River, river mile 0.0 – 7.2 (PF). | USFWS         | No. No nexus to Project effects.                         | \$273,600   | Not adopt. Because of the lack of a nexus to the Project, we have no justification for recommending the measure.  |
| 16. Survey Project lands and develop provisions to control noxious weeds (ALL).   | USFWS         | Yes.   | \$22,400  | Adopt.  |

**Table 5.2-1. Fish and wildlife agency recommendations (continued)**

| <b>Recommendation<br/>(Applicable Projects)<sup>a</sup></b>  | <b>Agency</b> | <b>Within the scope of 10(j)?</b>                        | <b>Total Levelized<br/>Annual Cost<br/>(2007\$)</b> | <b>Conclusion</b>  |
|--|---------------|--|---|--|
| 17. Develop a Bald Eagle Educational and Interpretive Program (ALL).                                   | USFWS         | No. Not a specific measure to protect fish and wildlife. | \$12,400  | Adopt.   |
| 18. Annually monitor bald eagle nests for occupancy and nesting productivity on Project lands (ALL).   | USFWS         | Yes.   | \$20,000  | Adopt.   |
| 19. Annually survey for new bald eagle nests on Project lands (ALL).                                   | USFWS         | Yes.   | \$20,000  | Adopt.   |
| 20. Develop Bald Eagle Nest Management Plans and monitor actual bald eagle use on Project lands (ALL). | USFWS         | Yes.   | \$12,400  | Adopt.   |
| 21. Implement HPMP (PF).   | IDFG          | No. Not a specific measure to protect fish and wildlife. | Included in Avista's proposal                       | Adopt.   |
| 22. Implement Coeur d'Alene Lake recreation measures (PF).   | IDFG          | No. Not a specific measure to protect fish and wildlife. | \$355,200   | Not adopt. The measure primarily focuses on Avista partnering with the agencies and providing funds. |
| 23. Implement Post Falls Land Use Management Plan (PF).  | IDFG          | No. Not a specific measure to protect fish and wildlife. | Included in Avista's proposal                       | Not adopt. The Land Use Management Plan provides general information rather than specific measures.  |

**Table 5.2-1. Fish and wildlife agency recommendations (continued)**

| <b>Recommendation<br/>(Applicable Projects)<sup>a</sup></b>   | <b>Agency</b> | <b>Within the scope of 10(j)?</b>   | <b>Total Levelized<br/>Annual Cost<br/>(2007\$)</b>          | <b>Conclusion</b>  |
|---|---------------|---|--|--|
| 24. Prepare, fund, and implement an Erosion Control, Prevention, and Restoration Program for Lake Spokane and Nine Mile Reservoir (SR).   | WDFW          | No. Not a specific measure to protect fish and wildlife.  | \$0  | Not adopt.   |
| 25. Prepare, fund, and implement a Sediment Management Plan to enhance fish and wildlife habitat in Nine Mile Reservoir and Lake Spokane (SR).  | WDFW          | Yes.  | \$700 plus the cost of indeterminate implementation measures | Adopt.   |
| 26. As part of a Salmonid Fisheries Management Plan, implement a Fisheries Stock Status Monitoring Program (SR).  | WDFW          | No. Portions of this study can be undertaken prior to license issuance. Also, general fish population monitoring is not a specific fish and wildlife measure. | \$700 plus the cost of indeterminate implementation measures | Not adopt. General monitoring information would provide no benefits to aquatic resources. The lack of benefits does not justify the cost of performing the monitoring. |
| 27. As part of a Salmonid Fisheries Management Plan, prepare and provide a baseline assessment and data analysis of fish populations in the Spokane River between Upriver Dam and Monroe Street Dam (SR). | WDFW          | No. This is a study that can be undertaken prior to license issuance. Also, general fish population monitoring is not a specific fish and wildlife measure.   | \$23,500   | Not adopt. A baseline assessment of trout would provide no benefits to aquatic resources. The lack of benefits does not justify the cost of conducting the assessment. |

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**Table 5.2-1. Fish and wildlife agency recommendations (continued)**

| Recommendation<br>(Applicable Projects) <sup>a</sup>   | Agency | Within the scope of 10(j)?  | Total Levelized<br>Annual Cost<br>(2007\$)                     | Conclusion  |
|--|--------|---|--|---|
| 28. As part of a Salmonid Fisheries Management Plan, prepare, fund, and implement a radio telemetry survey of trout in the lower Little Spokane River and upper Lake Spokane (SR). | WDFW   | No. This is a study that can be undertaken prior to license issuance. Also, general fish population monitoring is not a specific fish and wildlife measure. | \$31,400   | Not adopt. Surveys of trout movements would provide no benefits to aquatic resources. The lack of benefits to aquatic resources does not justify the cost of conducting the survey. |
| 29. Prepare, fund, and implement a program to assess and restore large woody debris in the Spokane River and reservoirs (SR).  | WDFW   | Yes.  | \$1,300 plus the cost of indeterminate implementation measures | Not adopt. We find that a lack of benefits associated with large woody debris management would not justify the cost.  |
| 30. Prepare, fund, and implement a program to enhance and create spawning habitat through gravel augmentation in the free-flowing sections of the Spokane River (SR).              | WDFW   | Yes.  | \$1,300 plus the cost of indeterminate implementation measures | Not adopt. We find that the lack of benefits associated with gravel augmentation would not justify the cost.  |
| 31. Prepare, fund, and implement a program to remove fish barriers (e.g., culverts) in the Little Spokane River drainage (SR).   | WDFW   | No. No nexus to Project effects.  | \$26,300   | Not adopt. Because of the lack of a nexus to the Project, we have no justification for recommending the measure.  |
| 32. Prepare, fund, and implement a Fisheries Public Outreach, Education, and Compliance Program specific to the protection of wild trout in the Spokane River (SR).                | WDFW   | No. Not a specific measure to protect fish and wildlife.  | \$15,000   | Not adopt. Actions associated with the public's compliance with state laws are not matters of Commission jurisdiction.  |

**Table 5.2-1. Fish and wildlife agency recommendations (continued)**

| <b>Recommendation<br/>(Applicable Projects)<sup>a</sup></b>  | <b>Agency</b> | <b>Within the scope of 10(j)?</b>  | <b>Total Levelized<br/>Annual Cost<br/>(2007\$)</b>            | <b>Conclusion</b>  |
|--|---------------|--|--|--|
| 33. Prepare, fund, and implement a Fishery Enhancement Supplementation Program primarily for the recreational fisheries (SR).  | WDFW          | No. The recommended program is very general and uncertain with respect to the numbers and locations for trout stocking; therefore, the recommendation is not a specific fish and wildlife measure. | \$2,600 plus the cost of indeterminate implementation measures | Not adopt. The recommendation is too general in nature to assess the benefits and costs of stocking; therefore, we have no justification for adopting the recommendation.  |
| 34. Prepare, fund, and implement an Aquatic Weed Management Plan focused on control of Eurasian watermilfoil, and other invasive plant species in the Nine Mile and Lake Spokane areas to enhance fish and wildlife habitat (SR).  | WDFW          | Yes.   | \$700 plus the cost of indeterminate implementation measures   | Not adopt. Avista's studies show that invasive aquatic weeds do not occur in Nine Mile Reservoir; therefore, we lack substantial evidence for recommending a invasive weed control plan for Nine Mile Reservoir. |
| 35. Implement SRP-TR-1 (Lake Spokane/Nine Mile Terrestrial, Riparian and Wetland Habitat Protection and Enhancement Plan) with modifications: prepare an Upland Habitat Protection and Enhancement Plan to protect shoreline and enhance at least 24 acres of upland habitat (SR). | USFWS         | No. No nexus to Project effects.   | \$11,200   | Not adopt. Because of the lack of a nexus to the Project, we have no justification for recommending the measure.   |

**Table 5.2-1. Fish and wildlife agency recommendations (continued)**

| <b>Recommendation<br/>(Applicable Projects)<sup>a</sup></b>   | <b>Agency</b>  | <b>Within the scope of 10(j)?</b>                                   | <b>Total Levelized<br/>Annual Cost<br/>(2007\$)</b> | <b>Conclusion</b>  |
|---|----------------|---|---|--|
| 36. Project Transmission Line Management Program (SRP-TR-2) (SR).   | USFWS,<br>WDFW | Yes.  | \$6,100   | Adopt.   |
| 37. Protect and manage all Avista-owned lands (about 1,976 acres) around Lake Spokane for wildlife (SR).  | WDFW           | No. No nexus to Project effects.                                    | \$30,000  | Not adopt. Because of the lack of a nexus to the Project, we have no justification for recommending the measure. |
| 38. Provide funds to purchase 300 acres of shoreline property and wetland habitat contiguous with Lake Spokane or other Avista-owned property (SR). | WDFW           | No. Funding is not a specific measure to protect fish and wildlife. | \$140,600   | Not adopt. Because of the lack of a nexus to the Project, we have no justification for recommending the measure. |

a. PF – Post Falls Project, SR – Spokane River Developments, All – both

*Source: Staff*

We have preliminarily determined that 3 recommendations within the scope of section 10(j) may be inconsistent with the purposes and requirements of the FPA or other applicable law.

We do not recommend adopting WDFW's recommendation for large woody debris management at the Spokane River Developments. We find that there would be no benefit to placing large woody debris downstream of the dams, because large woody debris would not likely remain in the river channel to provide cover for fish and contribute to overall habitat complexity. Information provided by Avista corroborates this finding by showing that large woody debris likely did not historically accumulate in the Project area but was flushed downstream. We conclude that the few benefits (if any) resulting from large woody debris management would not justify the cost of doing so. We are therefore making a preliminary determination that WDFW's recommendation for large woody debris management may be inconsistent with the public interest standard of section 4(e) of the FPA and the comprehensive planning standard of section 10(a) of the FPA.

We do not recommend adopting WDFW's recommendation for a program to enhance spawning habitat in the Spokane River through gravel augmentation. Information provided by Avista shows that spawning habitat in the Spokane River is underutilized by resident rainbow trout. Avista previously placed gravel in the Spokane River downstream of Monroe Street Development; however, that action failed to enhance the trout population. We therefore conclude that placing gravel in the free-flowing reaches of the Spokane River in the Project area would likely provide few, if any, benefits for the resident trout population. The annual cost of developing and implementing the plan would be \$20,000. We find that the lack of benefits associated with implementing the plan would not justify the cost. We are therefore making a preliminary determination that WDFW's recommendation for gravel augmentation may be inconsistent with the public interest standard of section 4(e) of the FPA and the comprehensive planning standard of section 10(a) of the FPA.

We do not recommend adopting WDFW's recommendation for an Aquatic Weed Management Plan focused on control of invasive aquatic plant species in Nine Mile Reservoir. Information provided by Avista shows that exotic weeds such as Eurasian water milfoil do not occur in Nine Mile Reservoir. We are therefore making a preliminary determination that WDFW's recommendation may be inconsistent with the substantial evidence standard of section 313(b) of the FPA.

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

Section 10(a)(1) of the FPA requires that any project for which the Commission issues a license shall be best adapted to a comprehensive plan for improving or developing a waterway or waterways for the use or benefit of interstate or foreign commerce; for the improvement and utilization of waterpower development; for the adequate PME of fish and wildlife; and for other beneficial public uses, including irrigation, flood control, water supply, recreation, and other purposes.

We find 24 of the 38 recommendations listed in Table 5.2-1 to be outside the scope of section 10(j) because they are recommendations for measures that

- are not specific measures to protect fish and wildlife resources (items 8, 10, 12-14, 17, 21-24, 32, 33, and 38); or
- are not in the state of jurisdiction of the agency (items 2, 3 and 6); or
- are considered a study that is not related to monitoring new measures and thus could have been undertaken during pre-filing, (items 26-28), or
- are a measure with no nexus to Project effects (items 9, 15, 31, 35, and 37).

We consider these measures under section 10(a) of the FPA.

Of the recommendations that we find to be outside of the scope of section 10(j), we do not adopt 19 of them because we cannot make a public interest determination with regard to future uncertain or unspecified measures and we find no nexus between the resource addressed by the measure and the Projects. A more detailed explanation of our analysis of the recommendations under section 10(a) that are not adopted can be found in section 5.1.

## **5.2.3 U.S. Department of Interior, Bureau of Indian Affairs, and USDA Forest Service Section 4(e) Conditions**

In section 2.3.3 and in Table 2.2.4-1, we identify the preliminary 4(e) conditions submitted by the DOI, BIA, and USDA Forest Service. Section 4(e) of the FPA, 16 U.S.C. § 797(e), provides that any license issued by the Commission “for a project within a federal reservation shall be subject to and contain such conditions as the Secretary of the responsible federal land management agency deems necessary for the adequate protection and use of the reservation.” Thus, any 4(e) condition that meets the requirements of the law must be included in a license issued by the Commission, regardless of whether we include the condition in our Staff Alternative. Of the 15 BIA preliminary 4(e) conditions, we consider nine of them to be administrative or legal in nature and not specific environmental

measures. In addition, the staff considers all of the USDA Forest Service preliminary 4(e) conditions (a total of four filed August 21, 2006) to be administrative or legal in nature and not specific environmental measures. We therefore do not analyze these 13 non-environmental conditions in our DEIS.

Table 5.2-2 summarizes our staff conclusions with respect to the preliminary 4(e) conditions that we consider to be environmental measures. More detailed descriptions of the conditions are presented in Table 2.2.4-1 and in Interior's letter to the Commission dated July 18, 2006. Of the six preliminary 4(e) conditions submitted by BIA, we include in the Staff Alternative some of the aspects of two of these conditions, for reasons summarized in Table 5.2-2 and, in some cases, discussed in more detail in section 5.1.1.3.

### **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 comprehensive plans that address various resources in Washington and Idaho. We determined that 25 comprehensive plans are relevant to the Post Falls Project and Spokane River Developments (Table 5.3-1). We found no inconsistencies.

Pursuant to section 10(a)(1) of the FPA, we reviewed the following documents that are relevant to the Post Falls Project and the Spokane River Developments: (1) Spokane County Shoreline Master Program; (2) Stevens County Shoreline Master Program; and (3) Watershed Management Plan: Little Spokane River and Middle Spokane River.

### **5.4 RELATIONSHIP OF LICENSE PROCESS TO LAWS AND POLICIES**

#### **5.4.1 Clean Water Act Section 401 Water Quality Certification**

Avista filed application to the WDOE for Water Quality Certification for the Post Falls Project and Spokane River Developments on July 12, 2006, and to the IDEQ for the Post Falls Project on July 12, 2006, as required under section 401(a)(1) of the CWA. Neither WDOE nor IDEQ has responded to these applications or submitted section 401 conditions at this time.

**Table 5.2-2. BIA preliminary 4(e) conditions for Post Falls Project**

| Condition <sup>a</sup>  | Annualized Cost      | Included in Staff Alternative?   |
|---|----------------------|--|
| 1. Prepare, fund, and implement a Coeur d'Alene Indian Reservation Shoreline Erosion Control Plan (2).  | \$100,000            | Yes, regarding the identification, mapping, description, and design of existing high-priority erosion sites. We endorse this provision in conjunction with Avista's Coeur d'Alene Lake and Tributary Erosion Control measure (PF-TR-1) |
| 2. Prepare, fund, and implement a Water Quality Monitoring Plan to document the influence of the Project on water quality within the Coeur d'Alene Indian reservation (3).                            | \$347,700            | Not adopt.   |
| 3. Identify cultural sites and properties and assess effects for sites located on the reservation. Prepare, fund, and implement a CRMP (4).   | \$168,500            | No, we adopt Avista's development of a HPMP (PF-CR-1), for lands within the Project boundary and lands identified in the APE.  |
| 4. Develop a Salmonid Fisheries Plan (5).   | \$3,200 <sup>b</sup> | No   |
| 5. Develop and implement an Aquatic Weed Management Plan to eradicate exotic and noxious aquatic weeds in the water affected by the Project that are within the Coeur d'Alene Indian reservation (6). | \$3,200 <sup>b</sup> | No, we recommend a Coeur d'Alene Lake Aquatic Weed Management Plan.  |
| 6. Develop and implement a Coeur d'Alene Indian Reservation Wetland and Riparian Habitat Replacement and Maintenance Plan (7).  | \$3,000 <sup>b</sup> | No, we adopt Avista's Coeur d'Alene Lake and Tributary Erosion Control and Wetlands and Riparian Habitat Protection and Enhancement Measure (PF-TR-1).   |

a. Numbers and letters in parentheses are the designations for the specific measures in the DOI letter filed July 18, 2006.

b. Includes only cost to prepare plan; cost to implement measure could not be determined.

Source: Staff

**Table 5.3-1. Comprehensive plans relevant to Post Falls Project and Spokane River Developments**

| <b>Comprehensive Plan</b>  | <b>Agency</b>   |
|--|---|
| The Fifth Northwest Electric Power and Conservation Plan, 2000. Council Document 2005-07   | Northwest Power and Conservation Council, Portland, Oregon  |
| Protected Areas Amendments and Response to Comments. 1988. Council Document 88-22 (September 14, 1988)                                 | Northwest Power and Conservation Council, Portland, Oregon  |
| Columbia River Basin Fish and Wildlife Program, 2000. Council Document 2000-19   | Northwest Power and Conservation Council, Portland, Oregon  |
| Mainstem Amendments to the Columbia River Basin Fish & Wildlife Program, 2003. Council Document 2003-11                                | Northwest Power and Conservation Council, Portland, Oregon  |
| North American Waterfowl Management Plan. May 1986   | U.S. Fish and Wildlife Service, Department of Interior; Canadian Wildlife Service, Environment Canada |
| Fisheries USA: The Recreational Fishery Policy of the U.S. Fish and Wildlife Service, 1986   | U.S. Fish and Wildlife Service, Department of Interior. Washington D.C.                               |
| Idaho Panhandle National Forests Plan, 1987. September 17, 1987  | U.S. Forest Service, Department of Agriculture, Coeur d'Alene, Idaho                                  |
| Idaho Fisheries Management Plan, 2001-2006   | Idaho Department of Fish and Game, Boise, Idaho   |
| Idaho Water Quality Standards and Wastewater Treatment Requirements, 1985  | Idaho Department of Health and Welfare, Boise, Idaho  |
| Idaho Statewide Comprehensive Outdoor Recreation Plan (SCORP) 2003-2007  | Idaho Department of Parks and Recreation., Boise, Idaho   |
| State Water Plan, 1986   | Idaho Water Resources Board, Boise, Idaho   |
| Statute establishing the State Scenic River System, Chapter 79.72 RCW. 1977  | State of Washington, Olympia, Washington  |
| Spokane Resource Area Management Plan and Final Environmental Impact Statement, 1985   | Bureau of Land Management, Department of Interior, Spokane, Washington                                |
| Decision Notice and Finding of No Significant Impact for the Inland Native Fish Strategy, 1994   | U.S. Forest Service, Department of Agriculture, Colville, Washington                                  |
| An Assessment of Outdoor Recreation in Washington state: A State Comprehensive Outdoor Recreation Planning (SCORP) Document, 2002-2007 | Interagency Committee for Outdoor Recreation, Olympia, Washington                                     |
| Application of Shoreline Management to Hydroelectric Developments, September 1986  | Washington State Department of Ecology, Olympia, Washington   |
| 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  |

**Table 5.3-1. Comprehensive plans relevant to Post Falls Project and Spokane River Developments (continued)**

| <b>Comprehensive Plan</b>  | <b>Agency</b>   |
|--|---|
| State of Washington Natural Heritage Plan, 1987  | Washington State Department of Natural Resources, Olympia, Washington               |
| Washington State Hydropower Development/Resource Protection Plan, December 1992              | Washington State Energy Office, Olympia, Washington                                 |
| Voices of Washington: Public Opinion on Outdoor Recreation and Habitat Issues, November 1995 | Washington State Interagency Committee for Outdoor Recreation, Olympia, 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                                     | WSPRC, Olympia, Washington  |
| Scenic Rivers Program- Report, January 1988  | WSPRC, Olympia, Washington  |

#### **5.4.2 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 result in the destruction or adverse modification of the critical habitat of such species.

Avista prepared and filed with the Commission a biological evaluation/BA of the Project-related effects on federally listed species on February 10, 2006. Six federally listed species occur in the vicinity of the Project (Avista, 2006c). The BA concluded that the Proposed Action would have no effect on four of the species and that it would not likely have an adverse effect on bull trout or the bald eagle, both federally listed threatened species.

Staff reviewed the BA and concur with its findings. Accordingly, we have adopted the BA as the Commission BA. We are submitting the BA to the USFWS for the purposes of initiating section 7 ESA consultation. Because the BA was prepared prior to preparation of this DEIS, it does not include a comprehensive analysis of all the measures associated within the DEIS. However, the BA, when combined with this DEIS, provides a comprehensive evaluation of the effects of the recommended alternative on listed species. Section 3.3.6 presents the staff's analysis of Project-related effects on endangered and threatened species.

As part of the section 7 consultation process, the Commission has requested concurrence with the effects determinations presented in this DEIS. Concurrence is pending.

### 5.4.3 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, 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 ACHP to comment on the undertaking. The relicensing of the Projects is considered an undertaking, and the Commission acts as the agency official.

Avista, under the authority of the Commission, has conducted section 106 consultation with the Washington and Idaho SHPOs, the Coeur d'Alene Tribe, the Confederated Tribes of the Colville Indian Reservation, the Spokane Tribe, and other interested parties. This consultation included scheduled collaborative cultural resource workgroup meetings, as well as individual meetings conducted by the applicant. Avista has completed a cultural resources overview, inventory, and historic properties evaluation for archaeological sites and aboveground resources. TCP identifications and evaluations are still in development. Under the Proposed Action, Avista 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 licenses.

Under the Proposed Action, Avista would file, for the Commission's approval, a final HPMP within 1 year after license issuances. Steps and procedures for Avista to complete the HPMP would be carried through the preparation and implementation of a PA crafted by Commission staff which would be made part of any new licenses for the Projects. Among other requirements involving the HPMP, Avista would provide a schedule in the HPMP to (1) evaluate all remaining cultural resources that are being affected by the Projects for National Register eligibility, and (2) resolve adverse effects to all historic properties (i.e., any structural, archaeological, or traditional cultural resources determined to be eligible for the National Register) that are being affected by the Projects. Avista would prioritize this schedule by first addressing Project-related adverse effects to the 71 archaeological sites already considered eligible for inclusion in the National Register. Avista would also resolve any Project-related adverse effects to any

National Register-eligible standing structure in the APE. Avista would then evaluate the remaining cultural resources and address Project-related effects to those resources considered eligible for the National Register. Avista would also include a program in the HPMP to conduct cultural resource monitoring of historic properties, places known to contain human remains, and areas known to be at high risk from erosion and looting located within the Projects' APE. Avista would also provide in the HPMP the specific treatment measures to be implemented to resolve adverse effects to historic properties affected by the Projects. Avista would provide in the HPMP specific guidance to the applicant's personnel about the treatment of historic properties during the term of the new license. The execution of the PA and subsequent implementation of the HPMP by Avista would fulfill the Commission's responsibilities under section 106 for new licenses involving the Projects.

#### **5.4.4 Federal Power Act Section 18 Fishway Prescriptions**

Section 18 of the FPA provides the U.S. Department of Commerce and the DOI (USFWS) certain authorities to prescribe measures for physical structures, facilities, and Project operations to facilitate the safe passage of fish upstream and downstream of the Projects. The USFWS filed for reserved authority under section 18 in the Department of Interior's Preliminary Conditions, Prescriptions, and Recommendations filing of July 18, 2006. This reservation provides for Interior to reserve its authority to prescribe fishways for any fish species to be managed, enhanced, protected or restored to the Spokane River and Coeur d'Alene basins during the terms of the license(s).

#### **5.4.5 Land and Water Conservation Fund Act**

The LWCF Program was established by the LWCF Act of 1965 (Pub. L. 88-578) to preserve, develop, and assure public accessibility to outdoor recreation resources. The program provides matching grants to states, and through the states to local government, for the acquisition and development of public outdoor recreation sites and facilities. Lands and waters purchased through the LWCF are used to (1) provide recreational opportunities; (2) provide clean water; (3) preserve wildlife habitat; (4) enhance scenic vistas; (5) protect archaeological and historic sites; and (6) maintain the pristine nature of wilderness areas.

Properties acquired or developed with LWCF assistance are prohibited by section 6(f)(3) of the LWCF Act from conversion to other than public outdoor recreation use without the approval of the Secretary of the Interior. Such conversions require the advance approval of the NPS, and suitable replacement land must be provided.

Under the Proposed Action for the Post Falls Project, Avista proposes, in consultation with the stakeholders (including the NPS), to enhance and improve the City of Coeur d'Alene Park, Mowry State Park, Heyburn State Park, and Hawleys Landing, which were either acquired or developed through the LWCF Act (Louis Berger Group, 2004a). We find that sufficient reservoir-based recreation and public access at the Project and elsewhere occur or would occur under the Staff Alternative; therefore, City of Coeur d'Alene Park, Mowry State Park, Heyburn State Park, and Hawleys Landing are not necessary for Project purposes. Consequently, for the Post Falls Project, a conversion of use would not occur.

Under the Proposed Action for the Spokane River Developments, Avista proposes, in consultation with the stakeholders (including the NPS), to enhance and improve recreation facilities at Lake Spokane and at Nine Mile Resort. The Nine Mile Resort is located adjacent to Riverside State Park- -developed in 1982 through the LWCF Act. As discussed in section 3.3.8, Avista's proposal to reconfigure the resort as a day-use area would complement the WSPRC's new campground and use at Riverside State Park. Under the Staff Alternative, we find that Nine Mile Resort is necessary for Project purposes and we recommend that this site be brought into the Spokane River Developments boundary. The Louis Berger Group survey (2004a) generally identifies Long Lake (the original name of Lake Spokane) as either acquired or developed through the LWCF Act but does not identify any specific recreation sites associated with the lake.

Nevertheless, under the Staff Alternative for the Spokane River Developments, the measures would provide recreational opportunities, enhance scenic vistas, and through the staff-recommended HPMP, protect archaeological and historic sites. We therefore find that under the Staff Alternative, a conversion of use would not occur.

#### **5.4.6 Columbia River Fish and Wildlife Program**

Under section 4(h) of the Pacific Northwest Power Planning and Conservation Act, the NPCC developed the Columbia River Basin Fish and Wildlife Program to protect, mitigate, and enhance the fish and wildlife resources associated with development and operation of hydroelectric projects within the Columbia River Basin. Section 4(h) states that responsible federal and state agencies should provide equitable treatment for fish and wildlife resources, in addition to other purposes for which hydropower is developed, and that these agencies should take the program into account, to the fullest extent possible.

The Columbia River Basin Fish and Wildlife Program directs agencies to consult with fish and wildlife managers and the NPCC during the study, design, construction, and operation of any hydroelectric development in the basin. The

Commission's regulations require an applicant to initiate pre-filing consultation with the appropriate federal and state fish and wildlife agencies and Indian tribes and to provide these groups with post-filing opportunities to review and to comment on the application. As summarized in Avista's license application, this consultation has occurred and resulted in partial settlement or concurrence on many proposed measures.

