

## EXECUTIVE SUMMARY

This final environmental impact statement (FEIS) evaluates the potential effects on the environment associated with the relicensing of the five hydroelectric developments that make up the 137.65-megawatt (MW) Spokane River Hydroelectric Project No. 2545. Currently, the licensed Project consists of these five hydroelectric developments, with one located in Kootenai and Benewah counties, Idaho, and the other four located in Spokane, Lincoln, and Stevens counties, Washington. The current license will expire on August 1, 2007.

On July 28, 2005, Avista Corporation (Avista) filed two separate applications with the Federal Energy Regulatory Commission (the Commission or FERC) for new licenses for the five hydroelectric developments. One application was filed for the upstream Idaho development, the 14.75 MW Post Falls Hydroelectric Project No. 12606. The other application was filed for the four Washington hydroelectric developments, the 122.9 MW Spokane Hydroelectric Project No. 2545 (referred to as the “Spokane River Developments,” with both collectively referred to as “the Projects”).

This FEIS has been prepared by the staff of the Commission to fulfill the requirements of the National Environmental Policy Act (NEPA); the Commission’s implementing regulations under Title 18, Code of Federal Regulations (CFR), Part 380; and the Council on Environmental Quality regulations for implementing NEPA (40 CFR Parts 1500-1508). The purpose of this document is to inform the Commission, the public, and the various federal and state agencies, tribes, and non-governmental organizations about the potential adverse and beneficial environmental effects of the proposed Project and of reasonable alternatives.

The principal issues that we address for the Post Falls Hydroelectric Project include the influence of Project operations on Coeur d’Alene Lake levels; water quality both in Coeur d’Alene Lake and downstream of Post Falls Dam; fishery resources below the dam and in the Coeur d’Alene Lake drainage; cultural resources in and around Coeur d’Alene Lake; and shoreline erosion, wetlands, and riparian areas in the backwater areas of Coeur d’Alene Lake. The principal issues that we address for the Spokane River Developments include the influence of Project operations on total dissolved gas (TDG) levels, dissolved oxygen (DO) levels, sediment transport, fish habitat, and wetlands. Other issues involve determining the appropriate level of enhancements for aesthetic flows in downtown Spokane, protection of bald eagles, and control of noxious and exotic weeds in the reservoirs and on the shorelands.

## **NO-ACTION ALTERNATIVE**

Under the No-Action Alternative, the Projects would continue to operate under the terms and conditions of the existing license, and no new environmental protection or enhancement measures would be implemented. We use this alternative to establish baseline conditions against which we evaluate other alternatives and judge the benefits and costs of any measures that might be required under new licenses.

## **AVISTA'S PROPOSED ACTION**

The Proposed Action would involve no changes to Project facilities other than replacing the flashboards at Nine Mile Development with a more permanent feature such as a pneumatically operated spillway gate (rubber dam). Any other facility changes would consist of generally minor and independent elements identified and constructed pursuant to specific protection, mitigation, and enhancement (PME) measures. Replacing the flashboards with a rubber dam would not change the pool level, nor would operations change at Nine Mile Development except that the flashboards would no longer be released downstream and Avista would have the ability to restore the pool elevation somewhat more quickly after spill events. Periodic maintenance of the entire facility would continue through the term of a new license.

The Proposed Action would not involve significant changes to Project operations other than to extend the time Coeur d'Alene Lake is at its maximum elevation (2,128 feet above mean sea level) by about 7 to 14 days each year (until September 15). This proposed change would enhance recreation at the Project.

The existing Project boundary encompassing the Post Falls Project is defined by the 2,128-foot elevation contour, as shown in a 1980 FERC license amendment. Recent fieldwork led Avista to make corrections to the 2,128-foot contour maps. Avista therefore is proposing to amend the Project boundary maps to correspond with the more recent data, consistent with retaining the current 2,128-foot boundary. Other proposed changes to the Project boundary include the following:

### **Post Falls Project**

- At the Post Falls Project, adding 2,352 acres (now within the 2,128-foot contour) and removing 0.5 acre east of the abandoned Corbin Ditch.

### **Spokane River Developments**

- At Upper Falls and Monroe Street Developments, removing 2.8 acres that serve no Project purpose;

- At Nine Mile Development, removing 66 acres that serve no Project purpose; and
- At Long Lake Development, adding 350.1 acres associated with a proposed shoreline buffer, the Nine Mile Resort (day use area), and two short sections of primary transmission line.

Avista proposes to operate the Projects in a manner similar to past operations with a set of comprehensive environmental measures. These primary measures are:

### **Post Falls Project**

- Maintaining a 600-cubic-foot-per-second (cfs) minimum discharge flow at Post Falls Dam, with the option to maintain a 500-cfs flow under low-flow conditions.
- Maintaining a maximum downramping flow rate of no more than a 4-inch drop per hour.
- Equipping the U.S. Geological Survey (USGS) gage no. 12419000 on the Spokane River downstream of Post Falls Dam to provide real-time flow information.
- Providing flows in the spring to protect rainbow trout spawning and fry emergence.
- Implementing TDG Control and Mitigation Programs along with other water quality monitoring provisions.
- Implementing a Fish Population and Habitat Protection and Enhancement Plan for westslope cutthroat trout and bull trout in the Coeur d'Alene Lake Basin and native rainbow trout in the free-flowing reach of the Spokane River.
- Implementing aquatic weed management measures in Coeur d'Alene Lake.
- Implementing a comprehensive Erosion Control and Wetland and Riparian Habitat Protection and Enhancement Program for Coeur d'Alene Lake and its tributaries.
- Providing aesthetic flows through the north channel at Post Falls Dam on weekends during the summer season.
- Preparing and implementing a Recreation Plan for the Post Falls Project.

- Developing and implementing an Interpretation and Education Plan.
- Conducting recreational use surveys every 6 years.
- Developing and implementing a Land Use Management Plan.
- Implementing a Historic Properties Management Plan (HPMP).
- Monitoring bald eagles, surveying for new eagle nests, and developing Bald Eagle Nest Management Plans on Project lands.

### **Spokane River Developments**

- Limiting the drawdown of Lake Spokane to no more than 14 feet except to periodically expose the lake bottom to freezing temperatures to help control aquatic weeds.
- Providing year-round aesthetic flows at Monroe Street Development and summer season flows at Upper Falls Development.
- Implementing TDG Control and Mitigation Programs along with other water quality monitoring provisions.
- Implementing a Fish Population and Habitat Protection and Enhancement Program for the Spokane River.
- Implementing aquatic weed management measures at Nine Mile Development and Lake Spokane.
- Implementing a comprehensive Riparian and Wetland Habitat Protection and Enhancement Program at Lake Spokane and Nine Mile Reservoir.
- Preparing and implementing a Recreation Plan for the Spokane River Developments.
- Developing and implementing an Interpretation and Education Plan
- Conducting recreational use surveys every 6 years.
- Developing and implementing a Land Use Management Plan.
- Implementing a HPMP.
- Managing Project transmission lines to minimize injuries/mortality to raptors and to control vegetation using non-chemical approaches.

- Monitoring bald eagles, surveying for new eagle nests, and developing Bald Eagle Nest Management Plans for Project lands.

## **STAFF ALTERNATIVE**

The Staff Alternative generally consists of the Proposed Action with additional or modified environmental measures recommended by staff to be performed by Avista. These measures include agency recommendations made pursuant to sections 4(e), 10(j), and 10(a) of the Federal Power Act (FPA). Staff recommendations include the following additions or modifications to Avista's proposal:

### **Post Falls Project**

- Developing and implementing a plan to monitor water temperature and DO in Coeur d'Alene Lake.
- Developing and implementing a plan to monitor water temperature and DO from Post Falls Dam to river mile 84.
- Developing and implementing a Post Falls Fisheries Public Education and Outreach Program Plan specific to native fish species upstream of the Post Falls Project.
- Preparing and filing a Post Falls Project Ramping Rate Report after implementation and evaluation of the effectiveness of the 4-inch-per-hour downramping rate.
- Using annual meetings with agencies and interested parties to determine priorities and projects slated for fisheries and aquatic habitat enhancement.
- Developing and implementing plans for identifying and protecting bald eagle nests.
- Developing and implementing a Land Use Management Plan for the Post Falls Project; the U.S. Fish and Wildlife Service (USFWS) Noxious Weed Management Program would be a component of the plan.
- Developing and implementing a Coeur d'Alene Lake Aquatic Weed Management Plan.
- Developing and implementing an Interpretation and Education Plan; a Bald Eagle Educational and Interpretive Program would be a component of the plan.

- Developing and implementing a final Post Falls Recreation Plan to include certain recreation facilities within the Project boundary.
- Addressing potential indirect effects of the Proposed Action on traditional cultural properties that may not be located within the predefined area of potential effects (APE).
- Providing a schedule in the HPMP to evaluate all remaining cultural resources for National Register eligibility and resolve all adverse effects to historic properties.
- Including programs in the HPMP to: (1) monitor tribally sensitive cultural sites; (2) expand the APE where there are erosional effects occurring on cultural resources above the 2,128-foot line; (3) safeguard against vandalism on archaeological sites; and (4) curate cultural resource materials in a fashion that is suitable to the Coeur d'Alene Tribe.

### **Spokane River Developments**

- Developing and implementing a Long Lake Oxygen Monitoring and Enhancement Plan.
- Stocking 6,000 catchable-sized sterile rainbow trout (6 to 8 inches) in Upper Falls Reservoir and 9,000 catchable-sized sterile rainbow trout in Nine Mile Reservoir.
- Developing and implementing a Lake Spokane Trout Stocking and Creel Survey Plan to guide the stocking of 155,000 catchable-sized sterile rainbow trout in Lake Spokane (Long Lake Reservoir) annually for the first 5 years following license issuance and to monitor the success of the fish stocking program.
- Developing and implementing a Spokane River Fisheries Public Education and Outreach Program Plan specific to native rainbow trout populations in the Spokane River downstream of the Post Falls Project.
- Preparing a Sediment Management Plan for Lake Spokane and Nine Mile Reservoir.
- Developing and implementing a Spokane River Developments Recreation Plan.
- Developing and implementing a Land Use Management Plan for the Spokane River Developments; the USFWS Noxious Weed Management Program would be a component of the plan.

- Developing and implementing a Lake Spokane Aquatic Weed Management Plan.
- Conducting even-year monitoring of Nine Mile Reservoir for early detection of noxious aquatic weeds.
- Developing and implementing an Interpretation and Education Plan; a Bald Eagle Educational and Interpretive Program would be a component of the plan.
- Monitoring wetlands in Lake Spokane after installation of a rubber dam and mitigating any net loss of vegetated wetlands.
- Providing a schedule in the HPMP to evaluate all remaining cultural resources for National Register eligibility and resolve all adverse effects to historic properties.
- Including programs in the HPMP to: (1) monitor tribally sensitive cultural sites; (2) safeguard against vandalism on archaeological sites; and (3) curate cultural resource materials in a fashion that is suitable to both the Coeur d'Alene Tribe and the Spokane Tribe of Indians.

## **STAFF ALTERNATIVE WITH MANDATORY CONDITIONS**

Section 4(e) of the FPA gives the Secretary of Interior (the U.S. Department of the Interior [DOI]) and the Secretary of Agriculture (the U.S. Department of Agriculture [USDA]) authority to impose conditions on a license issued by the Commission for hydropower projects located on “reservations” under the Secretary’s supervision (16 U.S.C §§796[2], 797[e]).

In a July 18, 2006, filing with the Commission, DOI submitted preliminary section 4(e) conditions on behalf of the Bureau of Indian Affairs (BIA) for the Post Falls Project. On May 17, 2007, DOI filed with the Commission modified terms, conditions, and prescriptions for the Post Falls Project. We analyze them in this FEIS.

On July 14, 2006, and August 21, 2006, the USDA Forest Service submitted preliminary section 4(e) conditions for the Post Falls Project. On May 3, 2007, the USDA Forest Service filed a letter with the Commission stating that its August 18, 2006, modified terms, conditions, and prescriptions for the Post Falls Project are its final terms, conditions and prescriptions for the Project. The modified conditions are administrative conditions, not environmental measures. We do not analyze them in this FEIS.

Pursuant to section 18 of the FPA, DOI also included in its July 18, 2006, filing on behalf of the USFWS, reservation of authority to prescribe the construction, operation, and maintenance of fishways in the future during the term of the license. The final 4(e) conditions and the reserved authority for fishway prescriptions must be included in any new license that may be issued for this Project. Incorporation of these mandatory conditions into a new license would cause us to modify or eliminate some of the environmental measures that we include in the Staff Alternative, including staff-recommended plans for water quality monitoring, shoreline and erosion control, and aquatic weed management at Coeur d'Alene Lake.

## **PROJECT EFFECTS AND CONCLUSION**

Table ES-1 summarizes the substantive differences between Avista's Proposal, the Staff Alternative, and the Staff Alternative with Mandatory Conditions. Based on our detailed analysis of the environmental benefits and costs associated with the four alternatives considered in detail in this FEIS, we conclude that the best alternative for the Projects would be to issue a new license(s) consistent with the environmental measures specified in the Staff Alternative.

**Table ES-1. Summary of key differences and components of Avista’s Proposed Action, the Staff Alternative, and the Staff Alternative with Mandatory Conditions for the Post Falls Hydroelectric Project and Spokane River Developments**

<b>Resource</b>	<b>Avista’s Proposal</b>	<b>Staff Alternative</b>	<b>Staff Alternative with All Final Modified Mandatory Conditions</b>
<b>POST FALLS PROJECT</b>			
Annual generation (megawatt-hour [MWh])	77,262	77,262	77,262
Net annual power benefits	-\$3,025,400	-\$1,980,600	-\$3,688,600
<b>Hydrologic Resources</b>			
Instream Flows	Minimum instream flow releases of 600 cfs year-round from Post Falls Dam, with ability to lower releases to 500 cfs between July 1 and September 15 of each year if the level of Coeur d’Alene Lake drops 3 inches or more below full-pool elevation 2,128 feet (PF-AR-1, Part 1).	Adopt Avista’s proposal.	No specific conditions required.
Ramping Rates	Upgrade USGS gage no. 12419000 to real-time capability (PF-REC-3). Follow a downramping rate that corresponds to no more than a 4-inch drop per hour in downstream water levels (PF-AR-1, Part 3).	Adopt Avista’s proposal, but also evaluate the effectiveness of the ramping rate and prepare and file a Post Falls Project Ramping Rate Report after implementation of the 4-inch-per-hour ramping rate.	No specific conditions required.

**Table ES-1. Summary of key differences and components of Avista’s Proposed Action, the Staff Alternative, and the Staff Alternative with Mandatory Conditions for the Post Falls Hydroelectric Project and Spokane River Developments (continued)**

<b>Resource</b>	<b>Avista’s Proposal</b>	<b>Staff Alternative</b>	<b>Staff Alternative with All Final Modified Mandatory Conditions</b>
<b>Water Quality</b>			
Water Quality Monitoring	Develop and implement a plan to monitor discharge and water temperature in the Spokane River from Post Falls Dam to the Idaho/Washington state line. Fund the Coeur d’Alene Tribe’s water quality monitoring program in Coeur d’Alene Lake and fund the purchase and installation of two meteorological stations (PF-WQ-2).	Develop and implement a plan to monitor water temperature and DO in Coeur d’Alene Lake. Develop and implement a plan to monitor water temperature and DO from the Post Falls Dam to river mile 84.	Require licensee to implement a comprehensive Water Quality Monitoring Program in Coeur d’Alene Lake, which includes sampling water temperature, DO, organic parameters, and phytoplankton. Also includes water quality modeling efforts every 5 years and installation of a meteorological station on the Coeur d’Alene Indian Reservation.
Total Dissolved Gas	Monitor, evaluate, and control the production of elevated TDG levels in discharges from Post Falls Project (PF-WQ-1).	Adopt Avista’s proposed measures.	No specific conditions required.

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**Table ES-1. Summary of key differences and components of Avista’s Proposed Action, the Staff Alternative, and the Staff Alternative with Mandatory Conditions for the Post Falls Hydroelectric Project and Spokane River Developments (continued)**

Resource	Avista’s Proposal	Staff Alternative	Staff Alternative with All Final Modified Mandatory Conditions
<p><b>Geologic Resources</b> Erosion Control, Wetland, and Riparian Habitat Plan (PF-TR-1)</p>	<p>Erosion control component: control erosion on the shorelines of Coeur d’Alene Lake and tributaries.</p>	<p>Adopt Avista’s erosion control program component included in PF-TR-1.</p>	<p>DOI’s modified condition no. 2 would require Avista to control shoreline erosion on 50% of the St. Joe River and on 30% of Coeur d’Alene Lake on the reservation. If included in the license as a mandatory condition, this alternative would replace our recommended measures for erosion control under PF-TR-1.</p>

**Table ES-1. Summary of key differences and components of Avista’s Proposed Action, the Staff Alternative, and the Staff Alternative with Mandatory Conditions for the Post Falls Hydroelectric Project and Spokane River Developments (continued)**

Resource	Avista’s Proposal	Staff Alternative	Staff Alternative with All Final Modified Mandatory Conditions
<b>Aquatic Resources</b>			
Fisheries Enhancement	<p>Provide for a Population and Habitat Protection Program for westslope cutthroat trout and bull trout in the Coeur d’Alene Lake Basin. Include rainbow trout spawning and fry emergence protection, and provide for assessments and monitoring of native salmonids. Additionally, include assistance and support for a Public Information and Education Program specific to bull trout and westslope cutthroat trout in the Coeur d’Alene Lake Basin (PF-AR-1, Parts 4, 5 and 6).</p> <p>Provide spring flows for upper Spokane River rainbow trout for spawning and fry emergence protection (PF-AR-1, Part 2).</p>	<p>No comparable fish population and aquatic habitat protection and enhancement measures recommended. Staff’s alternative includes some provisions for fisheries public outreach and education in the Coeur d’Alene Lake basin and the Spokane River. Staff’s alternative also includes Avista’s proposed measures for protecting spawning and emerging rainbow trout.</p>	<p>No specific conditions required.</p>

**Table ES-1. Summary of key differences and components of Avista’s Proposed Action, the Staff Alternative, and the Staff Alternative with Mandatory Conditions for the Post Falls Hydroelectric Project and Spokane River Developments (continued)**

<b>Resource</b>	<b>Avista’s Proposal</b>	<b>Staff Alternative</b>	<b>Staff Alternative with All Final Modified Mandatory Conditions</b>
<b>Aquatic Resources (cont)</b>			
Aquatic Weeds	Provide assistance and financial support for public education, monitoring, and weed management measures associated with exotic/noxious weeds in Coeur d’Alene Lake (PF-AR-2).	Adopt Avista’s proposed measures but require Avista to be fully responsible for lake weed management by filing a plan for Commission approval and implementing all measures included in the plan.	Add to Avista and Staff Alternative measures (as scaled back to not include duplicative enhancements on Coeur d’Alene Indian Reservation lands) to develop and implement an Aquatic Weed Management Plan to control exotic and noxious aquatic weeds in the waters affected by the Project that are within the Coeur d’Alene Indian Reservation.
<b>Terrestrial Resources</b>			
Bald Eagles	Annually survey for new bald eagle nests; annually monitor bald eagle nests for occupancy and productivity; and prepare bald eagle nest management plans—all for lands within the Project boundary.	In addition to Avista’s proposals, do not limit bald eagle surveys, monitoring, and nest management plans to Project lands (except on-the-ground enhancements) and add a requirement to develop a Bald Eagle Educational and Interpretive Program for the Projects.	No specific conditions required.

**Table ES-1. Summary of key differences and components of Avista’s Proposed Action, the Staff Alternative, and the Staff Alternative with Mandatory Conditions for the Post Falls Hydroelectric Project and Spokane River Developments (continued)**

Resource	Avista’s Proposal	Staff Alternative	Staff Alternative with All Final Modified Mandatory Conditions
<b>Terrestrial Resources (cont)</b>			
Erosion Control, Wetland, and Riparian Habitat Plan (PF-TR-1)	Wetland component: restore and/or acquire wetlands at Coeur d’Alene Lake and tributaries.	Adopt Avista’s proposed measures.	DOI modified condition no. 6 would require Avista to restore and/or replace 3,488 acres of wetlands on or off the reservation. Due to this condition, this alternative would not include Avista’s proposed measures for wetlands under PF-TR-1.
Noxious Weeds	Manage noxious weeds on its lands through a Land Use Management Plan (PF-LU-1) and educate the public about eradicating noxious weeds through its public outreach measure (PF-LU-1 and PF-REC-4).	In addition to Avista’s proposed measures, implement a Noxious Weed Management Program that includes surveys.	No specific conditions required.

**Table ES-1. Summary of key differences and components of Avista’s Proposed Action, the Staff Alternative, and the Staff Alternative with Mandatory Conditions for the Post Falls Hydroelectric Project and Spokane River Developments (continued)**

Resource	Avista’s Proposal	Staff Alternative	Staff Alternative with All Final Modified Mandatory Conditions
<b>Recreation Resources</b>			
Recreation Plan	Implement recreational enhancements in accordance with a proposed Recreation Plan. Establish a Recreation Enhancement Fund (PF-REC-1). Implement measures for recreational facilities on USDA Forest Service, Bureau of Land Management (BLM), and Coeur d’Alene Tribe lands (PF-REC-2).	Adopt in part; develop a final Recreation Plan to include certain recreation facilities within the Project boundary.	USDA Forest Service provided section 4(e) conditions related to administration and legal aspects of Avista’s proposal.
Whitewater Boating	Coordinate late spring and fall flow releases to extend whitewater boating opportunities and provide boating flows during one or two weekends in August while minimizing adverse effects on fish and aquatic resources. Includes provisions for improving downstream access (PF-REC-3).	Adopt in part; coordinate measure with Aquatic Resources, Fisheries Enhancement measures (PF-AR-1, Part 2).	No specific conditions required.
Interpretation and Education Plan	Provide for educational and interpretive media about the Project and related resources (PF-REC-4); conduct recreational use surveys every 6 years.	Adopt in part; add a Bald Eagle Educational and Interpretive Program component.	No specific condition proposed.

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**Table ES-1. Summary of key differences and components of Avista’s Proposed Action, the Staff Alternative, and the Staff Alternative with Mandatory Conditions for the Post Falls Hydroelectric Project and Spokane River Developments (continued)**

Resource	Avista’s Proposal	Staff Alternative	Staff Alternative with All Final Modified Mandatory Conditions
<p><b>Cultural Resources</b> Cultural Resources Management</p>	<p>Develop and implement the HPMP. The plan would include treatment and management recommendations for National Register of Historic Places-eligible archaeological sites located along the shorelines of Coeur d’Alene Lake and its tributaries and would address ongoing cultural resources protection and management (PF-CR-1). Additionally, develop a specific plan for cultural resources located on the reservation and develop treatment options for National Register-eligible resources located on the reservation that have not already been completed by previous studies.</p>	<p>Similar to Avista’s proposal, except the HPMP should also include: (1) a detailed schedule to evaluate all remaining cultural resources for National Register eligibility and resolve all adverse effects to historic properties, and (2) programs to monitor tribally sensitive cultural sites, expand the APE where there are erosional effects occurring on cultural resources above the 2,128-foot line, safeguard against vandalism on archaeological sites, and curate cultural resource materials.</p>	<p>Add to Avista and Staff Alternative measures (as scaled back to not include duplicative enhancements on Coeur d’Alene Indian Reservation lands) to include further analysis, protection, and treatment of cultural resource sites on the Coeur d’Alene Indian Reservation within the Project boundary and on lands above the 2,128-foot elevation where erosional effects are occurring or could occur in the future. Include provisions to prevent vandalism. Also provide for monitoring, traditional cultural property inventory and evaluation, education programs, development of an emergency recovery plan for inadvertent discovery of cultural sites, and management of material remains and records recovered from the reservation.</p>

**Table ES-1. Summary of key differences and components of Avista’s Proposed Action, the Staff Alternative, and the Staff Alternative with Mandatory Conditions for the Post Falls Hydroelectric Project and Spokane River Developments (continued)**

<b>Resource</b>	<b>Avista’s Proposal</b>	<b>Staff Alternative</b>	<b>Staff Alternative with All Final Modified Mandatory Conditions</b>
<b>SPOKANE RIVER DEVELOPMENTS</b>			
Annual generation (MWh)	795,903	795,903	No mandatory conditions.
Net annual power benefits	\$18,554,400	\$19,160,000	
<b>Hydrologic Resources</b>			
Aesthetic Flows	Provide a 200-cfs minimum daily aesthetic flow through Upper Falls Development bypass reach (north and middle channels) from 10 a.m. to one-half hour after sunset, Memorial Day weekend through September 30 (SRP-AES-1).  Continue 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 (SRP-AES-1).	Adopt Avista’s proposed measures.	No mandatory conditions.

**Table ES-1. Summary of key differences and components of Avista’s Proposed Action, the Staff Alternative, and the Staff Alternative with Mandatory Conditions for the Post Falls Hydroelectric Project and Spokane River Developments (continued)**

<b>Resource</b>	<b>Avista’s Proposal</b>	<b>Staff Alternative</b>	<b>Staff Alternative with All Final Modified Mandatory Conditions</b>
<b>Hydrologic Resources (cont)</b>			
Lake Levels	Limit the drawdown of Lake Spokane to 14 feet, except under certain emergency conditions. Periodically lower Lake Spokane during the winter to expose the lake bed to freezing temperatures to reduce the occurrence of aquatic weeds such as Eurasian watermilfoil.	Adopt Avista’s proposed measures.	No mandatory conditions.
<b>Water Quality</b>			
Total Dissolved Gas	Develop and implement a TDG Control and Mitigation Program, including spill gate operating protocols, monitoring, and a comprehensive Long Lake Development TDG Abatement Plan (SRP-WQ-1).	Adopt Avista’s proposed measures.	No mandatory conditions.

**Table ES-1. Summary of key differences and components of Avista’s Proposed Action, the Staff Alternative, and the Staff Alternative with Mandatory Conditions for the Post Falls Hydroelectric Project and Spokane River Developments (continued)**

<b>Resource</b>	<b>Avista’s Proposal</b>	<b>Staff Alternative</b>	<b>Staff Alternative with All Final Modified Mandatory Conditions</b>
<b>Water Quality(cont)</b>			
Water Quality Monitoring	Develop and implement a Water Quality Monitoring Program upstream of the Spokane River Developments and initiate and implement a Long Lake DO Enhancement Plan (SRP-WQ-2).	Develop and implement a Long Lake Oxygen Monitoring and Enhancement Plan.	No mandatory conditions
<b>Geologic Resources</b>			
Sediment Management	Support regional efforts to reduce erosion and downstream sedimentation in the Hangman Creek watershed (SRP-TR-1).	In addition to Avista’s erosion control measure (SRP-TR-1), include the preparation and implementation of a Sediment Management Plan for Nine Mile and Long Lake Developments.	No mandatory conditions.

**Table ES-1. Summary of key differences and components of Avista’s Proposed Action, the Staff Alternative, and the Staff Alternative with Mandatory Conditions for the Post Falls Hydroelectric Project and Spokane River Developments (continued)**

Resource	Avista’s Proposal	Staff Alternative	Staff Alternative with All Final Modified Mandatory Conditions
<b>Aquatic Resources</b> Fish Protection	Provide for fish population and aquatic habitat protection and enhancement efforts on the Spokane River and Lake Spokane. Also support the development and implementation of enhanced fish population and related aquatic habitat assessments and monitoring programs associated with the Upper Falls, Monroe Street, Nine Mile, and Long Lake Developments (SRP-AR-1).	Annually stock 6,000 rainbow trout in Upper Falls and 9,000 rainbow trout in Nine Mile Reservoir. Also annually stock 155,000 rainbow trout and conduct creel surveys in Lake Spokane for 5 years following license issuance. No other comparable fish population and aquatic habitat protection and enhancement efforts recommended.	No mandatory conditions.

**Table ES-1. Summary of key differences and components of Avista’s Proposed Action, the Staff Alternative, and the Staff Alternative with Mandatory Conditions for the Post Falls Hydroelectric Project and Spokane River Developments (continued)**

<b>Resource</b>	<b>Avista’s Proposal</b>	<b>Staff Alternative</b>	<b>Staff Alternative with All Final Modified Mandatory Conditions</b>
<b>Aquatic Resources (cont)</b>			
Aquatic Weeds	Implement site-specific and general weed control measures in Lake Spokane, including potential use of bottom barriers to maintain public access sites (SRP-AR-2).	Adopt Avista’s measure but require Avista to be fully responsible for lake weed management by filing a plan for Commission approval. Also, conduct even-year monitoring for early detection of aquatic weeds in Nine Mile Reservoir.	No mandatory conditions.
<b>Terrestrial Resources</b>			
Wetland and Riparian Area Enhancement	Secure property protection for, and implement, new wetland enhancement or restoration efforts adjacent to or near the Nine Mile or Long Lake Developments (SRP-TR-1)	In addition to Avista’s proposal, add a requirement to monitor wetlands affected by a new rubber dam at Nine Mile Development and mitigate any net loss of vegetated wetlands at the Project.	No mandatory conditions.

**Table ES-1. Summary of key differences and components of Avista’s Proposed Action, the Staff Alternative, and the Staff Alternative with Mandatory Conditions for the Post Falls Hydroelectric Project and Spokane River Developments (continued)**

<b>Resource</b>	<b>Avista’s Proposal</b>	<b>Staff Alternative</b>	<b>Staff Alternative with All Final Modified Mandatory Conditions</b>
<b>Terrestrial Resources (cont)</b>			
Transmission Line Corridor	Provide raptor protection and non-chemical vegetation management, as appropriate, on approximately 2.1 miles of existing Project transmission lines, as well as any new transmission lines that may become part of the Project in the future (SRP-TR-2).	Adopt Avista’s measures.	No mandatory conditions.
Noxious Weeds	Manage noxious weeds on its lands through a Land Use Management Plan (SRP-LU-1) and Transmission Line Management Plan (SRP-TR-2).	In addition to Avista’s proposed measures, implement a Noxious Weed Management Program that includes surveys.	No mandatory conditions.
Bald Eagles	Annually survey for new bald eagle nests; annually monitor bald eagle nests for occupancy and productivity; and prepare bald eagle nest management plans—all for lands within the Project boundary.	In addition to Avista’s proposals, do not limit bald eagle surveys, monitoring, and nest management plans to Project lands (except on-the-ground enhancements) and add a requirement to develop a Bald Eagle Educational and Interpretive Program for the Projects.	No mandatory conditions.

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**Table ES-1. Summary of key differences and components of Avista’s Proposed Action, the Staff Alternative, and the Staff Alternative with Mandatory Conditions for the Post Falls Hydroelectric Project and Spokane River Developments (continued)**

<b>Resource</b>	<b>Avista’s Proposal</b>	<b>Staff Alternative</b>	<b>Staff Alternative with All Final Modified Mandatory Conditions</b>
<b>Recreation Resources</b>			
Recreation Plan	Implement recreational enhancements in accordance with a proposed Recreation Plan (SRP-REC-1 and SRP-REC-2).	Adopt in part; develop final Recreation Plan to include certain recreation facilities within the Project boundary.	No mandatory conditions.
Interpretation and Education Plan	Provide for educational and interpretive media about the Project and related resources (SRP-REC-3); conduct recreational use surveys every 6 years.	Adopt in part; add a Bald Eagle Educational and Interpretive Program component.	No specific condition proposed.
<b>Aesthetic Resources</b>			
Aesthetic Flows	Provide a 200-cfs minimum daily flow through Upper Falls bypass reach (north and middle channels) from 10 a.m. to one-half hour before sunset from Memorial Day through September 30 and continue year-round 200-cfs flow over Monroe Street Dam.	Adopt Avista’s measures.	No mandatory conditions.

**Table ES-1. Summary of key differences and components of Avista’s Proposed Action, the Staff Alternative, and the Staff Alternative with Mandatory Conditions for the Post Falls Hydroelectric Project and Spokane River Developments (continued)**

<b>Resource</b>	<b>Avista’s Proposal</b>	<b>Staff Alternative</b>	<b>Staff Alternative with All Final Modified Mandatory Conditions</b>
<b>Cultural Resources</b>			
Cultural Resources Management	Develop and implement the HPMP.	Adopt Avista’s measures, including mandatory conditions; adopt all but one of the measures in DOI condition 4, which include expanding the APE, monitoring, anti-vandalism, and curation programs.	Adopt Avista’s measures, including mandatory conditions involving expanded APE, monitoring, anti-vandalism, and curation programs; in addition, Avista would provide funds for upgrading and expanding the Coeur d’Alene Tribe curation facility.

*Source: Staff*