

2.0 PROPOSED ACTION AND ALTERNATIVES

This section describes the Proposed Action and alternatives considered in this FEIS. Section 2.1 describes the No-Action Alternative, under which the Projects would continue Project operations under the terms and conditions of the existing license. This alternative provides the current conditions against which other alternatives are compared. Section 2.2 describes the Proposed Action, which is operation of the Project in accordance with Avista's proposal. Section 2.3 describes modifications to the Proposed Action based on agency and stakeholder terms, conditions, and recommendations as well as staff modifications. Section 2.4 discusses other alternatives that were considered but eliminated from detailed evaluation.

2.1 NO-ACTION ALTERNATIVE

Under the No-Action Alternative, the Projects would continue to operate under the terms and conditions of the existing license. No new environmental measures would be implemented. We use this alternative to establish baseline environmental conditions for comparison with the Proposed Action.

2.1.1 General Description of the Existing Facilities and Operations

The currently licensed Spokane River Project includes five hydroelectric developments and associated reservoirs located on the Spokane River in northern Idaho (Kootenai and Benewah counties) and eastern Washington (Spokane, Stevens, and Lincoln counties). The Spokane River originates at the outlet of Coeur d'Alene Lake in Idaho and flows westerly approximately 111 miles to its confluence with the Columbia River in eastern Washington (which is now within Lake Roosevelt, the impoundment created by Grand Coulee Dam). In downstream order, the Spokane River Project includes the Post Falls Project, which is in Idaho (river mile 102), and Upper Falls Development (river mile 74.2), Monroe Street Development (river mile 74), Nine Mile Development (river mile 58), and Long Lake Development (river mile 34), all four of which are located in Washington (see Figure 1.0-1).

Two other hydroelectric developments located on the Spokane River are the Upriver Project, owned by the City of Spokane (river mile 80; FERC Project No. 3074), and the Little Falls Project (river mile 29), which is owned by Avista but is not part of the Commission-licensed Spokane River Project. The Project boundary, as defined in the current FERC license, is depicted in Exhibit G of the license applications and encompasses approximately 44,556 acres. As these exhibits show, the current Project boundary encompasses four distinct areas: one each for the Post Falls Project, Nine Mile Development, and Long Lake Development, and

one that encompasses both the Upper Falls and Monroe Street Developments. The Project boundary generally follows the normal high-water line of the Project reservoirs, with some additional areas included around the Project dams, powerhouses, and tailraces. At Long Lake, Nine Mile, and Post Falls Developments, the Project boundary also encompasses some additional, relatively small parcels of company-owned lands.

2.1.2 Post Falls Project

The Post Falls Project is located on the Spokane River at river mile 102, in Post Falls, Idaho, approximately 9 miles downstream of the river headwaters at Coeur d'Alene Lake. This development impounds the 9 miles of the Spokane River upstream of the Post Falls Project. It influences the water levels in Coeur d'Alene Lake and the lower reaches of lake tributaries, depending on the volume of tributary inflow and time of year.

The Post Falls Project includes three dams (north channel, middle channel, and south channel, with natural islands connecting the three structures), spillways along the top of the north and south channel dams, a powerhouse integral to the middle channel dam, and various appurtenant structures. The operating reservoir for the Post Falls Project encompasses Coeur d'Alene Lake, the lower portions of the St. Joe, St. Maries, and Coeur d'Alene Rivers, and the portion of the Spokane River between the lake outlet and the dam. Development dimensions and specifications associated with the Post Falls Project include:

- a reservoir that covers the uppermost 9 miles of the Spokane River, Coeur d'Alene Lake, and lower portions of lake tributaries, having a normal full-pool elevation of 2,128 feet;
- Coeur d'Alene Lake (including lateral lakes and affected river reaches of the Coeur d'Alene, St. Joe, St. Maries, and Spokane Rivers), having a surface area of approximately 40,600 acres, a maximum depth of more than 200 feet, and usable storage of approximately 223,100 acre-feet (equating to a 9-foot drawdown at the development and a 7.5-foot drawdown in the lake);
- a 431-foot-long, 31-foot-tall north channel dam, with a top-of-dam elevation of 2,133 feet and incorporating the north channel spillway (spillway crest elevation of 2,114 feet), which includes a 100-foot-wide, 14-foot-high rolling sector gate, seven 21-foot-wide, 12-foot-high radial gates, and one 12-foot-wide, 12-foot-high radial gate;
- a 215-foot-long, 64-foot-tall middle channel dam, with a top-of-dam elevation of 2,135 feet;

- a 127-foot-long, 25-foot-tall south channel dam, with a top-of-dam elevation of 2,135 feet and incorporating the 37-foot-long south channel spillway (spillway crest elevation of 2,128.5 feet), which is controlled by six 6-foot-wide, 13-foot-high vertical sluice gates;
- six 56-foot-long, 11.25-foot-diameter intakes and steel penstocks, integral to the middle channel dam, with top of intake openings at 2,113.75 feet; and
- a six-turbine powerhouse, integral to the middle channel dam, with a total nameplate capacity of 14.75 MW and a total hydraulic capacity of 5,400 cubic feet per second (cfs).

2.1.3 Spokane River Developments

The Spokane River Developments—Upper Falls Development (river mile 74.2), Monroe Street Development (river mile 74), Nine Mile Development (river mile 58), and Long Lake Development (river mile 34)—are located in Washington (see Figure 1.0-1).

2.1.3.1 Upper Falls Development

Upper Falls Development is located on the Spokane River (river mile 74.2) in downtown Spokane, Washington, 28 miles downstream of the Post Falls Project. Upper Falls Development creates a relatively small reservoir.

Upper Falls Development includes two dams located on either side of a natural island (Havermale Island) in the Spokane River. A dam and headgate structure (i.e., for the intakes to the penstocks) is located on the south channel (river mile 74.2), and a dam and control works structure (for water level and spill control) is located on the north channel (river mile 74.7).

Some of the features, structures, and specifications associated with Upper Falls Development include:

- a 4-mile-long reservoir upstream of the south channel dam, having an impounded surface area of 150 acres and a volume of 800 acre-feet at normal full-pool elevation of 1,870.5 feet;
- a 366-foot-long, 35.5-foot-tall north channel dam with a top-of-dam elevation of 1,876.9 feet and incorporating the north channel spillway (spillway crest elevation of 1,854.9 feet), which includes two 60-foot-wide, 16-foot-high rolling sector gates and four approximately 42-foot-wide, 13-foot-high vertical lift gates;

- a 70-foot-long, 30-foot-tall south channel dam with a top-of-dam elevation of 1,876.9 feet;
- three 15-foot-high, 12-foot-wide intakes with headgates, with the top of the intake opening at 1,861.4 feet;
- one 350-foot-long, 18-foot-diameter, reinforced concrete penstock; and
- one powerhouse, located along the south shore of the river, containing one vertical turbine with a total nameplate capacity of 10 MW and a total hydraulic capacity of 2,500 cfs.

2.1.3.2 Monroe Street Development

Monroe Street Development, which creates a very small reservoir, is also located in downtown Spokane, Washington, at river mile 74, about 1,000 feet downstream of Upper Falls Development. Monroe Street Development includes a single concrete gravity dam spanning the river, with an intake structure located adjacent to the south abutment of the dam. The powerhouse is located underground on the south shore of the Spokane River a short distance downstream of the dam. A small public park area, Huntington Park, surrounds Monroe Street Development. Some of the features, structures, and specifications associated with Monroe Street Development include:

- a 0.2-mile-long reservoir with a normal full-pool elevation of 1,806 or 1,806.3 feet (the additional 0.3 foot of elevation is maintained during viewing hours to provide a required 200-cfs minimum flow over the spillway), 5 acres of impounded surface area, and 30 acre-feet of storage;
- a 24-foot-tall, 240-foot-long dam with a top-of-dam elevation of 1,806 feet;
- a 217-foot-wide concrete overflow spillway;
- a single intake with a 332-foot-long, 14-foot-diameter steel penstock; and
- a powerhouse (largely underground and completed during a 1992 redevelopment) containing one vertical, Kaplan-style turbine with a total nameplate capacity of 14.82 MW and a total hydraulic capacity of 2,850 cfs.

2.1.3.3 Nine Mile Development

Nine Mile Development is located on the Spokane River at river mile 58. Nine Mile Development lies 16 miles downstream of Monroe Street Development and 24 miles upstream of Long Lake Development. A single dam and associated powerhouse comprise this development. Some unique features associated with

Nine Mile Development include a sediment bypass tunnel (or diversion tunnel) that was installed at the dam in 1996 and the Nine Mile cottages, originally built for facility operators at the dam and now leased to Washington State Parks. Some of the features, structures, and specifications associated with Nine Mile Development include:

- an approximately 6-mile-long reservoir (Nine Mile Reservoir) with normal full-pool elevation of 1,606.6 feet, an impounded surface area of 440 acres at full pool and storage of 3,130 acre-feet under a 16.6-foot maximum drawdown;
- a 364-foot-long, 58-foot-tall dam;
- a 225-foot-long concrete overflow spillway, with a spillway crest elevation of 1,596.6 feet, plus two rows of 5-foot-high flashboards;
- four intakes integral to the face of the dam where water is fed to the turbines via steel and concrete bulkhead chambers called a “wet pit;” and
- a powerhouse integral to the dam containing four horizontal Francis turbines (including an indoor substation) with a total nameplate capacity of 26.4 MW and a total hydraulic capacity of 6,500 cfs.

2.1.3.4 Long Lake Development

Long Lake Development is located on the Spokane River (river mile 34), approximately 25 to 30 miles northwest of Spokane, Washington, and 24 miles downstream of Nine Mile Development. Long Lake Development includes an L-shaped, concrete gravity main dam and adjacent intake structure, a concrete arch cutoff dam located along the western shoreline approximately 700 to 800 feet upstream of the main dam, a gated spillway along the top of the main dam, and a powerhouse. Some of the features, structures, and specifications associated with Long Lake Development include:

- a 23.5-mile-long reservoir (Lake Spokane) with a maximum width of about 0.7 mile, a maximum depth of 180 feet, and approximately 5,060 acres of impounded surface area and 105,080 acre-feet of storage at normal full-pool elevation of 1,536 feet;
- a 213-foot-tall, 593-foot-long main channel dam, with a top-of-dam elevation of 1,537 feet;
- a 108-foot-tall, 247-foot-long cutoff dam;

- a 213-foot-long, gated ogee spillway with a crest elevation of 1,508 feet; eight 29-foot-tall, 25-foot-wide lift gates; and a capacity of 115,000 cfs at a normal full-pool elevation of 1,536 feet;
- four intake structures integral to the main dam, with three 16-foot-diameter and one 14-foot-diameter, 236-foot-long steel penstocks that traverse the downstream face of the dam, and the top of each penstock at elevation 1,507 feet; and
- a powerhouse, including an indoor substation, located at the base of the dam containing four turbines with a total nameplate capacity of 71 MW and a total hydraulic capacity of 6,300 cfs.

2.1.4 Current Project Operations

Generally, the five hydroelectric developments that make up the current Spokane River Project are operated to maximize power generation to meet local and regional electricity demands, with consideration given to flood management, natural resource protection, recreation, and other river-water associated needs. The Post Falls Project and the four Spokane River Developments are part of the regional coordination effort expressed in the PNCA. During extreme weather events or regional power shortages, normal operating conditions on the Spokane River Project may be modified, but still remain consistent with constraints imposed by the existing license. Operational changes may also occur in emergency situations, such as accidents or other conditions that pose a threat to life or property, or in the event of equipment failures. Emergency Action Plans (EAPs) are updated annually for Post Falls Project and for Nine Mile and Long Lake Developments. The EAPs provide operators with detailed instructions of procedures to follow during emergency situations, including separate flowcharts for various situations with phone numbers of all pertinent local, state, and federal agencies, as well as the order in which the phone calls should be made. Specific examples of emergency situations would include, but would not necessarily be limited to, a spill gate motor being destroyed by lightning, or law enforcement personnel requesting that Avista close spill gates to conduct a search for a missing person. Under these types of situations, Avista would likely have to modify Project operations. The Upper Falls and Monroe Street Developments are classified as low hazard-potential dams. Therefore, they are granted exemption status from filing an EAP.

The Spokane River Developments and the Post Falls Project are operated in a coordinated manner. The Post Falls Project is used to “regulate” flows in the Spokane River at certain times and in accordance with minimum flow requirements and other lake level or downstream flow considerations. Downstream of the Post Falls Project, the Upper Falls and Monroe Street

Developments are operated as run-of-river facilities. Farther downstream, Nine Mile Development is generally operated as a run-of-river facility, with relatively minor pool level fluctuations.

“Run-of-river” means that water flowing into the reservoir is essentially equal to the water being discharged from the hydroelectric development, and the reservoir water levels change little unless under flood conditions, operation and maintenance (O&M) activities, or some other unusual circumstance.

At Long Lake Development, the most downstream of the five current Project developments, there is significant storage. The storage capacity at Long Lake Development is used primarily to respond to the energy demands of Avista’s customers during the winter months, with the pool level lowering over a period of several weeks to several months, depending on energy needs and water inflow. During the summer, Avista attempts to maintain Lake Spokane at a level near full pool, generally using the top foot of storage for responding to daily changes in energy demand.

More detail on the operation of the individual Project hydroelectric developments, the associated water levels and Project discharges, and specific limitations and requirements of the current FERC license is provided below.

2.1.4.1 Post Falls Project

The Post Falls Project is currently operated to meet several interests, including:

- minimum-flow requirements of the FERC license;
- customer energy demands;
- consideration of the need to maximize the amount of storage available in Coeur d’Alene Lake for absorbing spring runoff flows; and
- consideration of upstream recreational, residential, and commercial interests for a stable water level along with downstream resource needs.

The current FERC license for the Spokane River Project requires a minimum instantaneous discharge at the Post Falls Project of at least 300 cfs, or an amount equal to the inflow to Coeur d’Alene Lake, whichever is less. This minimum flow is normally provided through powerhouse discharge into the river immediately below the middle channel dam. Seepage flows also provide some water into the downstream channels. These seepage flows are estimated as high as 30 cfs or more into the north channel when the upstream pool is at 2,128 feet. Considerably less seepage flows into the south channel (10 cfs or less), but it is

still enough to maintain several wetted pools in the incised bedrock below this dam.

Beyond meeting the minimum flow requirements of the license, operations of the Post Falls Project vary from year to year due to weather conditions and energy demands. The operations of the Post Falls Project have also evolved over time in response to a range of community interests. The Post Falls Project typically controls water levels in the Spokane River and Coeur d'Alene Lake about 6 months a year. Many factors, including weather forecasts, snowpack conditions, runoff predictions, resource interests, and energy demand, are considered in determining when to begin controlling the lake's water level with the Post Falls Project. More importantly, Avista cannot begin controlling the lake level until after spring runoff flows have peaked and largely subsided. This typically occurs in late June or early July, and allows Avista to then maintain Coeur d'Alene Lake at or near elevation 2,128 feet throughout the summer recreation season.

In the fall, Avista begins to release water at the Post Falls Project, resulting in a gradual drawdown of the Coeur d'Alene Lake water level. The drawdown, typically 1 to 2 feet per month, generally begins the week following Labor Day. The timing of the drawdown varies because of the annual variations in flow conditions, weather forecasts, and energy demands. This release of water achieves several ends: optimizing energy production, adding storage capacity in Coeur d'Alene Lake for fall and winter precipitation to help minimize upstream flooding, and increasing flow in the Spokane River.

2.1.4.2 Upper Falls Development

Upper Falls Development operates near elevation 1,870.5 feet with a full-pool elevation of 1,871 feet, and does not include any discharge requirements or other limitations under the current FERC license. Upper Falls Development has very little storage (800 acre-feet) and is operated as a run-of-river facility. Because the City of Spokane's Upriver Project, located upstream of Upper Falls Development, is also operated as a run-of-river facility, the operation and subsequent electric generation at Upper Falls Development is driven primarily by Spokane River flows.

When river flow is less than the 2,500-cfs turbine capacity of Upper Falls Development, all flows are typically routed into the south channel through the intake structures and to the powerhouse. During these times, the north channel around Havermale Island receives only minimal leakage flows of about 30 cfs through the control works and a small amount of groundwater inflow. When river flow exceeds the turbine capacity, excess water is passed through the north

channel control works while maintaining a relatively stable water level in the reservoir.

2.1.4.3 Monroe Street Development

Monroe Street Development is operated as a run-of-river facility with a pool elevation of 1,806 feet, with almost no storage (30 acre-feet). Therefore, as at Upper Falls, Spokane River flows from Coeur d'Alene Lake drive the operation of Monroe Street Development. The current FERC license for the Spokane River Project requires Avista to maintain an aesthetic flow of at least 200 cfs over the Monroe Street Dam and downstream ledges during viewing hours (10 a.m. to one-half hour after sunset) each day, year-round.

2.1.4.4 Nine Mile Development

The Nine Mile forebay has an operating full-pool elevation of 1,606.6 feet. The FERC license for the Project does not include any minimum flow, water level, or other limitations specific to Nine Mile Development. However, flow below the dam generally mirrors inflow into the reservoir. There is no bypass reach at Nine Mile Development, since the powerhouse is integral to the dam. Powerhouse discharge and/or spill over the dam flows directly into the downstream river channel.

Nine Mile Development has 3,130 acre-feet of storage and, while capable of limited storage-and-release operations, is operated as a run-of-river facility. Therefore, operation of Nine Mile Development is driven primarily by Spokane River flows from Coeur d'Alene Lake. Two rows of 5-foot-high boards are installed on the spillway to maintain the full-pool level. During high-flow periods, sections of the flashboards are removed to allow the water to pass, resulting in a temporary drop and subsequent restoration of the reservoir surface elevation of up to 10 feet in those years when flashboard removal is required. The flashboards are replaced once river flow allows for safe access to the crest of the dam.

2.1.4.5 Long Lake Development

The normal full-pool elevation at Long Lake Development is 1,536 feet. The current FERC license for the Project allows for a 24-foot drawdown of Lake Spokane to elevation 1,512 feet. No other water level or discharge requirements or limitations in the FERC license pertain to Long Lake Development.

With more than 100,000 acre-feet of storage, Long Lake Development is operated as a storage-and-release facility for power generation purposes. Historically, Lake Spokane was lowered to the 24-foot limit during certain winter periods. In recent years, depending on river flows and several other considerations,

Lake Spokane has rarely been lowered more than 14 feet during the winter, and is typically held within 3 feet of full pool during most of the year. During the summer recreation season, the reservoir is normally within 1 foot of the full-pool elevation.

2.1.4.6 Flood Control Operations

The five developments of the currently licensed Spokane River Project play an annual role in managing upstream flood potential. This role is limited by the Project's storage capacity (confined to the 7.5-foot depth between the low pool elevation of 2,120.5 feet and the full-pool elevation of 2,128 feet) and by the outflow capacity of the natural outlet restriction of Coeur d'Alene Lake relative to flood flows in the Spokane River Basin. This same feature, the lake's natural outlet restriction, provides downstream flood protection. Based on USGS gage historical records, inflow to the lake can be more than twice as high as outflow, which has led to a recorded lake elevation as high as 2,139 feet (Kootenai County, 1998).

Avista draws Coeur d'Alene Lake down during the fall (to as low as elevation 2,120.5 feet), which increases the storage capacity in Coeur d'Alene Lake to accommodate fall-through-spring precipitation and spring snowmelt. Nonetheless, spring rain and snowmelt can result in high flows into Coeur d'Alene Lake such that the lake level rises above elevation 2,128 feet, even though spill gates are open at the Post Falls Project and all water reaching the development is immediately passed downstream. Because of the natural Coeur d'Alene Lake outlet characteristics, there is little the Post Falls Project can do to alter a flood event once flows reach flood stage.

When consistent with operational objectives, Avista voluntarily seeks to maintain certain reservoir levels favorable for recreational activities during the recreation season, although the current FERC license contains no related requirements. At Coeur d'Alene Lake, Avista typically maintains reservoir elevations at or near 2,128 feet from late June or early July through the week after Labor Day. At Lake Spokane, Avista tries to maintain reservoir elevations within 1 foot of full pool (1,536 feet) throughout the summer recreation season.

2.1.4.7 Fishery Management Operations

In cooperation with the WDFW and IDFG, Avista monitors flows and rainbow trout spawning and emergence in the free-flowing reach of the Spokane River downstream of the Post Falls Project each year (Avista, 2000). Based on the annual variability in river flow and the monitoring results, Avista voluntarily operates the Post Falls Project in a manner that attempts to maintain downstream river flows that are sufficient to keep the majority of the rainbow trout spawning

redds wetted through the fry emergence period. This operation, including the monitoring and agency consultation, often requires either no substantial change in operations or only a minor delay or lessening in spill and/or discharge at the Post Falls Project, with an associated minor delay in reaching the desired Coeur d'Alene Lake summer water level near 2,128 feet (Avista, 2000). The current FERC license contains no specific requirements for this operation.

2.1.4.8 Project Safety

The Post Falls Project and the Spokane River Developments have been operating for over 50 years under the existing license. During that time, the Commission staff has conducted operational inspections focusing on the continued safety of the structures, identification of unauthorized modifications, efficiency and safety of operations, compliance with the terms of the license, and proper maintenance. In addition, the Projects have been inspected and evaluated every 5 years by an independent consultant, and a consultant's safety report has been submitted for Commission review. The Commission staff would continue to inspect the Projects during the new license terms to ensure continued adherence to Commission-approved plans and specifications, special license articles relating to construction (if any), operation and maintenance (O&M), and accepted engineering practices and procedures.

2.1.5 Current Environmental Measures

Avista currently provides facilities and programs related to river flows, fisheries, wildlife, recreation, and aesthetic resources, either as required by the current FERC license or other regulations or on a voluntary basis.

The current FERC license for the Spokane River Project includes several specific terms and conditions providing for the protection and enhancement of environmental resources. These terms and conditions include:

- maintaining a minimum discharge from the Post Falls Project of 300 cfs or an amount equal to the inflow to Coeur d'Alene Lake, whichever is less;
- maintaining an aesthetic scenic flow of at least 200 cfs over the Monroe Street Dam during normal viewing hours from 10 a.m. to one-half hour after sunset each day;
- limiting the maximum drawdown of Long Lake Development operating reservoir (Lake Spokane) to no more than 24 feet (elevation 1,512 feet, compared to a normal full-pool elevation of 1,536 feet);

- maintaining Huntington Park, located in downtown Spokane and adjacent to Monroe Street Development, as a publicly accessible park and open space; and
- stocking catchable-size rainbow trout in the Spokane River each year both upstream of Monroe Street Development and in the Nine Mile Reservoir.

In addition to the specific environmental measures called for in the existing FERC license for the Project, Avista has also implemented environmental and resource-protection measures to ensure compliance with other applicable regulatory requirements. Avista has also entered into a number of voluntary cooperative agreements with agencies, organizations, and individuals, or otherwise supported a variety of measures to enhance and conserve environmental resources. Examples of these regulatory actions and voluntary measures (as noted in parentheses below) that are specifically designed to protect and enhance Project-associated resources include the following:

- Maintenance of the Coeur d'Alene Lake level at or close to 2,128 feet from late June or early July past Labor Day.
- Maintenance of the Lake Spokane elevation within 1 foot of full pool (1,536 feet) throughout the summer recreation season.
- Maintenance of public access at the Nine Mile Resort on Lake Spokane. The facility, which is owned by Avista and operated by concessionaires, offers boating, camping, and swimming opportunities.
- Appropriate preservation, protection, and maintenance of historic properties and features associated with the Project, pursuant to the National Historic Preservation Act of 1966 (NHPA) and as listed or eligible for listing in the National Register of Historic Places (the National Register). Past and ongoing activities include maintenance of the Nine Mile cottages and ongoing consideration of the historic significance of various features of Post Falls, Upper Falls, Nine Mile, and Long Lake Developments whenever considering or proposing any significant facility modifications or alterations. Avista also donated a turbine unit removed from Monroe Street Development to the Henry Ford Museum.
- Development and implementation of appropriate guidelines and requirements for addressing interactions between migratory birds and/or bird nests and Project-associated facilities (pursuant to the Migratory Bird Treaty Act and/or Endangered Species Act [ESA]). Activities have included relocating nests (primarily osprey nests), providing alternative nesting platforms, and modifying transmission line spacing (increasing the spacing between “hot” wires and grounding wires or surfaces). These activities are intended to protect

birds from electrocution as well as to prevent power outages and damage to power poles.

- Monitoring of rainbow trout spawning and fry emergence each year in the free-flowing reach of the Spokane River, located downstream of the Post Falls Project, and coordination of the operation of the development with fisheries agencies to keep the majority of the redds wetted through the fry emergence period.
- When possible, limitation of the winter drawdown of Long Lake Development operating reservoir (Lake Spokane) to no more than 14 feet in consideration of local domestic water supplies.
- Implementation of a Bald Eagle Nest Territory Management Plan for a nest site associated with Long Lake Development.
- Lease of approximately 20 acres of property at Falls Park and 78 additional acres of Avista land for Q'emiln Park to the City of Post Falls, at no cost.
- Support for the development and implementation of an Aquatic Weed Management Plan for Lake Spokane.
- Provision of financial support to the WDNR for O&M of the Lake Spokane boat launch and campground and the Avista-owned boat-in overnight camping sites.
- Support of numerous other public parks, water access, and recreational sites and features. Specific examples include land donations and other support for the Cougar Bay conservation area; financial support for Falls Park, Riverfront Park, Riverside State Park, Plese Flats, and the Centennial Trail; and development and/or maintenance of the Nine Mile Resort and the North Shore campsites (Lake Spokane).
- Permitting of limited private recreational uses of Project-associated property through annual permits.
- Support of numerous resource agency, academic, and Avista studies and resource evaluations concerning Project-associated environmental resources. These have included water quality studies and evaluations, erosion inventories and studies, wetlands inventories, several wildlife and recreation studies, and a variety of fisheries-related studies and investigations undertaken in years prior to the relicensing process.
- Support of local watershed restoration efforts in Hangman Creek Watershed.

2.2 PROPOSED ACTION – APPLICANT’S PROPOSAL

Under the Proposed Action, Avista would continue to operate the Projects in a manner similar to current Project operation, but with a slightly modified reservoir management approach and flow release regimes. Additionally, Avista would implement numerous protection, mitigation, and enhancement (PME) measures at each development.

2.2.1 Project Facilities

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 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.

2.2.2 Project Boundary

The current Project boundary for 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, add 2,352 acres (currently within the 2,128-foot contour) and remove 0.5 acre of private land east of the abandoned Corbin Ditch.

Spokane River Developments

- 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 Nine Mile Development, remove the land occupied by the Nine Mile Cottages that serve no Project purpose; and

- 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.

2.2.3 Project Operations

Under the Proposed Action, Avista would operate the Post Falls Project and the four Spokane River Developments in a manner generally similar to current Project operations but with several operational changes intended to address stakeholder concerns. Proposed operational changes include the following:

Post Falls Project

- The minimum discharge from the Post Falls Project would be set at 600 cfs year-round under normal operations, as measured at USGS gage 12419000 (Spokane River near Post Falls). Between July 1 and September 15 of each year, Avista would reduce the minimum discharge to 500 cfs if the level of Coeur d'Alene Lake dropped below 2,127.75 feet (3 inches below full pool) as recorded at the USGS gage at Coeur d'Alene Lake (station no. 12415500).
- Operations at the Post Falls Project would be managed to comply with the discharge approaches outlined in the *Upper Spokane River Rainbow Trout Spawning and Fry Emergence Protection Plan* (Avista, 2004).
- The summer recreational elevation of Coeur d'Alene Lake, at or near 2,128 feet, would start as soon as practicable each summer (the same as current Project operations) and would be maintained until September 15. Exceptions would occur to maintain the minimum discharge flow from the Post Falls Project and to ensure that spring flows for trout are provided according to the *Upper Spokane River Rainbow Trout Spawning and Fry Emergence Protection Plan*.
- Operations at the Post Falls Project would follow a downramping rate that corresponds to no more than a 4-inch drop per hour in downstream water levels at the USGS gage no. 12419000 (Spokane River near Post Falls).
- Flows from the Post Falls Project would be adjusted when possible in late spring and in the fall to maintain preferred whitewater paddling flows for an extended time, and, when possible, increased flows for open-water boating would be scheduled for one or more weekends in August. Enhancement measures for fisheries resources would take precedence over any whitewater paddling flow releases.

Spokane River Developments

- Aesthetic flows would continue to be provided year-round at Monroe Street Development and also would be initiated seasonally at the Post Falls Project and 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 deviate 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.

2.2.4 Project Environmental Measures

Avista's Proposed Action consists of numerous PME measures at the Projects. We summarize the primary components of the Proposed Action PMEs in Table 2.2.4-1 and compare them, where applicable, with any alternative measures provided by stakeholder groups and agencies subsequent to the filing of the application.

2.3 MODIFICATIONS TO THE PROPOSED ACTION

After evaluating the Proposed Action and recommendations from the resource agencies and other interested parties, we considered what, if any, additional PME measures would be necessary or appropriate with continued operation of the Projects. These additional measures include the preliminary recommendations, terms and conditions, and prescriptions for the Projects submitted in response to the Commission's notice of May 18, 2006 (see section 1.5).

Federal and state resource agencies, local governmental entities, and other stakeholder groups submitted their comments, recommendations, terms and conditions, and prescriptions to the Commission in July 2006. These comments, recommendations, terms and conditions, and prescriptions often have several components and can generally be characterized as variations to Avista's PME measures considered as part of the Proposed Action. These modified measures are analyzed in this FEIS and summarized alongside Avista's measures in Table 2.2.4-1.

Table 2.2.4-1. Proposed Action and stakeholder alternatives measures

Resource Area	Proposed Action	Alternate Agency/Stakeholder Recommendations
POST FALLS PROJECT		
Operational Measures	<p>Flow Regime/Lake Levels: Set the minimum discharge from Post Falls Project at 600 cfs year-round under normal operations, as measured at the USGS gage 12419000 (Spokane River near Post Falls). Between July 1 and September 15 of each year, reduce the minimum discharge to 500 cfs if the level of Coeur d'Alene Lake drops below 2,127.75 feet (3 inches below full pool) as recorded at the USGS gage at Coeur d'Alene Lake (station no. 12415500).</p> <p>Manage operations at Post Falls Project to comply with the discharge approaches outlined in the Upper Spokane River Rainbow Trout Spawning and Fry Emergence Protection Plan (Avista, 2004).</p> <p>Conduct operations at Post Falls Project to follow a downramping rate that corresponds to no more than a 4-inch drop per hour in downstream water levels at the USGS gage 12419000 (Spokane River near Post Falls).</p> <p>Start the summer recreational elevation of Coeur d'Alene Lake, at or near 2,128 feet, as soon as practicable each summer (the same as current Project operations) and maintain that elevation until September 15. Exceptions would occur, if needed, to maintain the minimum discharge flow from Post Falls Project and to meet fisheries resource needs, as noted above.</p> <p>Adjust flows from Post Falls Project when possible in late spring and in the fall to maintain preferred whitewater paddling flows for an extended time, and, when possible, schedule increased flows for open-water boating for one or more weekends in August.</p>	<p>Flow Regime/Lake Levels: Provide a 600-cfs year-round minimum instream flow for Post Falls discharges within the context of a 5-year adaptive management program (WDOE, filed 7/17/2006).</p> <p>Provide a 500-/600-cfs minimum flow release within the context of an adaptive management program, with final flow releases to be set between 500 and 800 cfs (WDFW, filed 4/3/2007).</p> <p>Provide spring flows for incubation and emergence of trout in the Spokane River April 15 through June 7 of each year at Post Falls Dam. Flow shall be at a level of 60 percent of the highest 7-day running average (consecutive days) of daily discharge flows from Post Falls Project for the period of April 1-15 each year, or natural flow, whichever is less (WDFW 10(j), filed 7/18/2006).</p> <p>Release approximately 770 cfs minimum instream flow from Post Falls to provide 500 cfs at Barker Road (Sierra Club, filed 7/17/2006; CELP, filed 7/17/2006).</p> <p>Release sufficient water from Post Falls Dam to achieve a flow of 500 cfs at Barker Road. Collect and compare real-time flow data at Barker Road for flows below 800 cfs during summer months to identify the loss of flow and calculate the minimum instream flow for Post Falls to protect fish habitat. The monitoring should occur over the first 5 years of the license (The Lands Council, filed 7/17/2006).</p> <p>Maintain Coeur d'Alene Lake at 2,128 feet as soon as practicable each summer and maintain that level until September 15, subject to the proposed minimum discharge flows at Post Falls and providing appropriate measures for impacts on seasonal wetlands created by the extended summer pool elevation (State of Idaho, filed 07/17/2006).</p>

Table 2.2.4-1. Proposed Action and stakeholder alternatives measures (continued)

Resource Area	Proposed Action	Alternate Agency/Stakeholder Recommendations
Operational Measures (cont)	Provide aesthetic flows at 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 (PF-AES-1).	<p>Maintain Coeur d'Alene Lake at 2,128 feet, from April 1 through October 31, unless there is an actual danger of flooding (Spokane River Association, filed 03/14/2006).</p> <p>Maintain Coeur d'Alene Lake at 2,128 feet for the months of June through September, subject to variations due to spring runoff (Hagadone Hospitality Co., filed 03/14/2006; Kootenai County Board of Commissioners, dated 07/13/2006).</p> <p>Recommend not having a 500-cfs minimum instream flow at Post Falls when Coeur d'Alene Lake drops 0.25 foot. Recommend generally higher releases of 700 to 800 cfs to achieve a minimum flow of 500 cfs at Barker Road (NWA, filed 7/17/2006).</p> <p>Provide ramping rates from Post Falls of no more than 2 inches per hour as measured at the USGS gage 12419000) (WDFW 10(j), filed 7/18/2006).</p> <p>Endorse no more than 2-inch-per-hour ramping rate at Post Falls, or ramping rates suggested by WDOE and WDFW (CELP, filed 7/17/2006).</p> <p>Mandate ramping rate of no more than 1 inch per hour at Post Falls Dam from June 16 to October 31 and 2 inches per hour from November 1 to February 15 (Sierra Club, filed 7/17/2006; The Lands Council, filed 7/17/2006).</p>

Table 2.2.4-1. Proposed Action and stakeholder alternatives measures (continued)

Resource Area	Proposed Action	Alternate Agency/Stakeholder Recommendations
Geology and Soils Measures	<p>Erosion Control Program (First Component of the Coeur d’Alene Lake and Tributary Erosion Control and Wetland and Riparian Habitat Protection and Enhancement [PF-TR-1]):</p> <p>Identify and prioritize specific areas of particular interest for protection needs and specific erosion control activities and projects. Potential sites and erosion control measures that may be included in the initial plan are in the erosion study (Earth Systems and Parametrix, 2004). Sites likely to be prioritized based on presence and condition of National Register-eligible archaeological sites. Sites also to include appropriate monitoring and evaluation of biological and physical effectiveness of the specific erosion-control measures to be implemented, and projects to be implemented within the first 5 years of the license term with updates on a 5-year cycle.</p>	<p>Coeur d’Alene Lake and Tributary Erosion Control (tied in with riparian measures):</p> <p>Make some modifications to the Coeur d’Alene Lake Tributary Erosion Control and Habitat Protection and Enhancement Measure in terms of priorities and jurisdictional cooperation (State of Idaho, IDFG 10(j), filed 7/17/2006) (also under Terrestrial).</p> <p>Prepare, fund, and implement a Coeur d’Alene Indian Reservation Shoreline Erosion Control Plan (DOI 4(e), filed 7/18/2006). Include identifying and prioritizing all existing erosion sites, completely describing these sites, mapping them, preparing the design of erosion control measures for each site, preparing and implementing monitoring and maintenance procedures, filing the plan in two parts with implementation schedules, and obtaining tribal approval and providing annual reports.</p> <p>Implement measures to prevent or reduce erosion on Coeur d’Alene Lake (Sierra Club, filed 7/17/2006; The Lands Council, filed 7/17/2006).</p>

Table 2.2.4-1. Proposed Action and stakeholder alternatives measures (continued)

Resource Area	Proposed Action	Alternate Agency/Stakeholder Recommendations
Water Resource Measures	Total Dissolved Gas (TDG) Control and Mitigation Program (PF-WQ-1):	Water Quality PME:
	Develop and implement a TDG Control and Mitigation Program, including spill gate operating protocols and ongoing TDG monitoring and evaluation.	Prepare, fund, and implement a Water Quality Monitoring Plan to document the influence of the Project on water quality with in the Coeur d’Alene Indian Reservation (DOI, preliminary 4(e) conditions filed 7/18/2006, modified 4(e) conditions filed 5/7/2007).
	Idaho Water Quality PME (PF-WQ-2):	Undertake a Water Rights Protection Program (Sierra Club, filed 7/17/2006).
	Develop and implement a Water Quality Monitoring Program.	Undertake measures to minimize TDG downstream of dams (Sierra Club, filed 7/17/2006).
		Obtain National Pollutant Discharge Elimination System (NPDES) permits for dams (Sierra Club, filed 7/17/2006; The Lands Council, filed 7/17/2006).
		Install and operate water quality monitoring stations downstream of Post Falls and Long Lake Dams (Sierra Club, filed 7/17/2006).

Table 2.2.4-1. Proposed Action and stakeholder alternatives measures (continued)

Resource Area	Proposed Action	Alternate Agency/Stakeholder Recommendations
Aquatic Resource Measures	<p>Post Falls Project Fish PME Program (PF-AR-1):</p> <p>Maintain a 600-cfs minimum discharge flow at Post Falls Project under normal operating conditions, with a defined trigger for reducing the minimum flow to 500 cfs.</p> <p>Comply with Post Falls Project discharge levels as outlined in the Upper Spokane River Rainbow Trout Spawning and Fry Emergence Protection Plan.</p> <p>Maintain a maximum allowable per hour discharge downramping rate at Post Falls Project that corresponds to no more than a 4-inch drop per hour in downstream water levels.</p> <p>Provide for a Population and Habitat Protection and Enhancement Program 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 downstream of Post Falls Project. This component may also support wild salmonid protection by providing for alternative angling and harvest opportunities through recreational and fishery enhancement and supplementation.</p> <p>Support population and habitat assessments and monitoring for westslope cutthroat trout and bull trout in the Coeur d'Alene Lake Basin and/or native rainbow trout in the free-flowing reach of the Spokane River downstream of Post Falls Project.</p> <p>Provide assistance and support for a Public Information, Education, and Law Enforcement Program specific to bull trout and westslope cutthroat trout in the Coeur d'Alene Lake Basin and native rainbow trout in the free-flowing reach of the Spokane River downstream of Post Falls Project.</p>	<p>Fish PME Program:</p> <p>Conduct a Post Falls Project Fish PME Program, including provisions for tributary habitat restoration, fish population monitoring, recreational and fishery habitat protection, and a fisheries public outreach program (IDFG modified 10(j), filed 3/6/2007).</p> <p>Encourage Avista's "commitment for community outreach, education, and enforcement to try and diminish illegal harvesting of fish" at Post Falls Project. Provide annual reports (rather than every 5 years) on Post Falls Fishery Protection and Enhancement Program (CELP, filed 7/17/2006).</p> <p>Develop a Salmonid Fisheries Plan (Coeur d'Alene Tribe in support of BIA, preliminary 4(e), filed 7/17/2006).</p> <p>Restore 6.6 miles of tributary habitats upstream of the inundation zone of Coeur d'Alene Lake (USFWS modified 10(j), filed 3/5/2007).</p> <p>Fund and implement population and habitat protection efforts specifically directed at bull trout and westslope cutthroat trout in the Coeur d'Alene Basin (The Lands Council, filed 7/17/2006).</p> <p>Develop a mitigation program to address Project impacts to the benthic community in the Spokane River (Sierra Club, filed 7/17/2006).</p> <p>Establish a habitat restoration/mitigation trust fund (Sierra Club, filed 7/17/2006; The Lands Council, filed 7/17/2006).</p> <p>Conduct a Trout Stock Status Monitoring Program (WDFW modified 10(j), filed 3/6/2007).</p>

Table 2.2.4-1. Proposed Action and stakeholder alternatives measures (continued)

Resource Area	Proposed Action	Alternate Agency/Stakeholder Recommendations
Aquatic Resource Measures (cont)	<p>Coeur d’Alene Lake Aquatic Weed Management Program (PF-AR-2):</p> <p>Provide assistance and financial support for public education, monitoring, and weed management measures associated with exotic/noxious weeds in Coeur d’Alene Lake.</p>	<p>Coeur d’Alene Lake Aquatic Weed Management Program:</p> <p>Conduct an Aquatic Weed Management Program to control exotic and noxious aquatic weeds in the waters affected by the Project that are within and adjacent to the Coeur d’Alene Indian Reservation (DOI modified 4(e), filed 5/5/2007).</p>
Terrestrial Resource Measures	<p>Wetlands Program (Second Component of the Coeur d’Alene Lake and Tributary Erosion Control and Wetland and Riparian Habitat Protection and Enhancement [PF-TR-1]):</p> <p>Identify and evaluate agreed-upon wetland and riparian habitat sites associated with Coeur d’Alene Lake or its tributaries in order to protect, enhance, or restore them. Appropriate access would need to be obtained prior to implementing this measure.</p>	<p>Coeur d’Alene Lake and Tributary Erosion Control and Wetlands and Riparian Habitat Protection and Enhancement:</p> <p>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 (palustrine, forested, broad-leaved deciduous) wetlands, and (2) restore 250 acres of PSS (palustrine, scrub-shrub) wetlands (USFWS section 10(j), filed 7/17/06; revised 3/5/07). The USFWS indicates that PF-TR-1 will satisfy this recommendation.</p> <p>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) projects should not be selected solely based on cultural resource values, (3) funds should be allocated for erosion vs. wetlands, and (4) the project selection process should be modified (IDFG section 10(j), filed 7/17/06; revised 3/6/07).</p>

Table 2.2.4-1. Proposed Action and stakeholder alternatives measures (continued)

Resource Area	Proposed Action	Alternate Agency/Stakeholder Recommendations
Terrestrial Resource Measures (cont)		<p data-bbox="1188 337 1881 483">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 (USFWS 10(j), filed 7/17/06).</p> <p data-bbox="1188 505 1881 618">Develop and implement a Coeur d'Alene Indian Reservation Wetland and Riparian Habitat Plan to restore and/or replace 3,488 acres of emergent, scrub-shrub, and/or forested wetlands on or off the reservation (DOI, 4(e), filed 7/18/2006 revised 5/7/07).</p> <p data-bbox="1188 639 1881 727">Implement measures to protect and restore wetlands at Coeur d'Alene Lake (Sierra Club, filed 7/17/2006; The Lands Council, filed 7/17/2006).</p> <p data-bbox="1188 748 1331 776">Bald Eagles:</p> <p data-bbox="1188 797 1881 885">Develop a Bald Eagle Educational Interpretive Program (both Post Falls Project and Spokane River Developments) (USFWS 10(j), filed 7/18/2006)</p> <p data-bbox="1188 906 1881 993">Annually monitor bald eagle nests for occupancy and nesting productivity on Project lands (both Post Falls Project and Spokane River Developments) (USFWS 10(j), filed 7/18/06).</p> <p data-bbox="1188 1015 1881 1102">Annually survey for new bald eagle nests on Project lands (both Post Falls Project and Spokane River Developments) (USFWS 10(j), filed 7/18/06).</p> <p data-bbox="1188 1123 1881 1187">Develop Bald Eagle Nest Management Plans and monitor actual bald eagle use on Project lands (USFWS 10(j), filed 7/18/2006).</p> <p data-bbox="1188 1208 1373 1230">Noxious Weeds:</p> <p data-bbox="1188 1252 1881 1307">Develop a management plan to control noxious weeds on Project lands (DOI, USFWS 10(j), filed 7/18/2006).</p>

Table 2.2.4-1. Proposed Action and stakeholder alternatives measures (continued)

Resource Area	Proposed Action	Alternate Agency/Stakeholder Recommendations
Cultural Resource Measures	<p>Historic Properties Management Plan (HPMP) (PF-CR-1):</p> <p>Develop and implement the HPMP.</p> <p>Avista’s proposed alternative to DOI’s (BIA) cultural resources measure—Have Avista prepare and implement an HPMP for NHPA-eligible cultural resources within the existing and expanded area of potential effects (APE) of Coeur d’Alene Indian Reservation and other parts of the Project.</p>	<p>Cultural Resources Plan:</p> <p>Identify cultural sites and properties and assess effects for sites located on the reservation (DOI 4(e), filed 5/7/2007).</p> <p>Prepare, fund, and implement a Cultural Resources Management Plan (CRMP) (DOI 4(e), filed 5/7/2007).</p>
Recreation Resource Measures	<p>Post Falls Project Recreation Plan (PF-REC-1):</p> <p>Develop and implement a Project Recreation Plan that encompasses the various recreation PME measures and consult with the appropriate recreation management entities. Provide 25 percent of funds for the recreation measures.</p> <p>Establish a Recreation Enhancement Fund.</p>	<p>Post Falls Project Recreation Plan:</p> <p>Implement the proposed Post Falls Project recreation measures (PF-REC-1 through PF-REC-4), provided the scheduled whitewater flow releases are demonstrated to not harm fishery resources (State of Idaho, filed 3/6/2007).</p> <p>Within 1 year of new license, develop a recreation plan pertaining to PF-REC-1 in the license application. Provide 25 percent of funds for the recreation measures (USDA Forest Service modified 10(a), filed 8/18/2006).</p>

Table 2.2.4-1. Proposed Action and stakeholder alternatives measures (continued)

Resource Area	Proposed Action	Alternate Agency/Stakeholder Recommendations
Recreation Resource Measures (cont)	<p>Coeur d’Alene Recreation PME (PF-REC-2):</p> <p>Provide funds (not to exceed \$27,750) for improvements at City of Coeur d’Alene Park. Enter into a separate agreement with the City of Coeur d’Alene to provide \$3,500 annual O&M costs.</p> <p>Improve existing recreation facilities at Falls Park. Provide funds (not to exceed \$75,000) for project development and provide \$20,000 annual O&M costs.</p> <p>Improve existing recreation facilities at Q’emiln Park. Provide funds (not to exceed \$75,000) for project development and provide \$30,000 annual O&M costs.</p> <p>Partially fund seven Coeur d’Alene Lake and tributary boat ramp extensions. Provide funds (not to exceed \$75,000) for all of the boat ramp extensions.</p> <p>Install private aids to navigation on Coeur d’Alene Lake and along the Coeur d’Alene and St. Joe Rivers as they enter the lake. Provide funds (not to exceed \$20,000) for new or enhanced navigational aids and provide \$1,000 annual O&M costs.</p>	<p>Coeur d’Alene Recreation PME:</p> <p>Implement the Coeur d’Alene Lake recreation measures (IDFG, filed 3/12/2007; DOI, filed 3/5/2007).</p> <p>Obtain prior written approval from the Forest Service for all final design plans at Bell Bay Campground, Medimont Recreation Area, and Rainey Hill Recreation Area (USDA Forest Service modified 4(e), filed 8/18/2006).</p>

Table 2.2.4-1. Proposed Action and stakeholder alternatives measures (continued)

Resource Area	Proposed Action	Alternate Agency/Stakeholder Recommendations
Recreation Resource Measures (cont)	<p>Provide funds (not to exceed \$200,000) to the BLM for development or enhancement of water-based recreational facilities on Coeur d'Alene Lake and its tributaries. Enter into a separate agreement with BLM to provide \$33,000 annual O&M costs.</p> <p>Cooperate with the Coeur d'Alene Tribe to develop or enhance water-based recreational facilities on Coeur d'Alene Lake and its tributaries. Provide funds (not to exceed \$200,000) to develop an undetermined recreational site. Enter into a separate agreement with the tribe to provide \$30,000 annual O&M costs.</p> <p>Partially fund abandoned dock and debris removal from Coeur d'Alene Lake</p> <p>Partially fund (not to exceed \$100,000) the Higgens Point breakwater and shoreline stabilization project. Enter into a separate agreement with the IDPR to provide \$10,000 annual O&M costs.</p> <p>Partially fund (not to exceed \$54,000) water-based facilities at the Forest Service Bell Bay Campground, Medimont Recreation Area, and Rainey Hill Recreation Area. Enter into a separate agreement with the Forest Service to provide \$15,000 annual O&M costs.</p> <p>Provide funds (not to exceed \$1,500) for mooring buoys and related O&M costs (\$3,400 annually) at Mowry State Park.</p> <p>Provide funds (not to exceed \$60,000) for three Coeur d'Alenes trail spurs that would provide access for people with disabilities and development of a pedestrian pullout along the trail at the Plummer Trailhead. Enter into a separate agreement with the Coeur d'Alene Tribe to provide \$7,500 annual O&M costs.</p>	<p>Indemnify, defend, and hold the Forest Service harmless for any damages or claims sustained by the Forest Service during construction of improvements at Bell Bay Campground, Medimont Recreation Area, and Rainey Hill Recreation Area (DOI, USDA Forest Service modified 4(e), filed 8/18/2006).</p> <p>Within 6 months of license issuance begin planning the implementation of site-specific recreation improvements at Bell Bay Campground, Medimont Recreation Area, and Rainey Hill Recreation Area as defined under PF-REC-2 in the license application. Provide approximately 25 percent of the funds (not to exceed \$54,000) for Forest Service recreation sites and provide \$15,000 annual O&M costs (USDA Forest Service modified 10(a), filed 8/18/2006).</p> <p>Public Outreach:</p> <p>Within 1 year of new license, develop an Interpretation and Education Plan as specified in PF-REC-4 of the license application (USDA Forest Service modified 10(a), filed 8/18/2006).</p>

Table 2.2.4-1. Proposed Action and stakeholder alternatives measures (continued)

Resource Area	Proposed Action	Alternate Agency/Stakeholder Recommendations
Recreation Resource Measures (cont)	<p>Provide funds (not to exceed \$4,000) for Hawley's Landing boat dock improvements.</p> <p>Provide funds (not to exceed \$2,000) for sand at Plummer and Rocky Point beaches.</p> <p>Provide funds (not to exceed \$60,000 per year) to ensure continued public access and development of new and/or reconstructed recreation facilities on or adjacent to the Project waters.</p> <p>Post Falls/Spokane River Recreation PME (PF-REC-3):</p> <p>Coordinate the late-spring and fall flow releases from Post Falls Project to extend whitewater boating opportunities on the Spokane River and provide scheduled boating flow releases up to two weekends in August.</p> <p>Provide funds (not to exceed \$15,000) for upgrading the USGS Post Falls gage (gage no. 12419000) and provide real-time flow information system. Enter into a separate agreement with the USGS to provide \$2,500 annual O&M costs.</p> <p>Cooperate in the acquisition, development, and related O&M for the Trailer Park Wave access site. Provide funds (not to exceed \$150,000) for site acquisition and/or project development and provide \$15,000 annual O&M costs.</p> <p>Provide funds (not to exceed \$50,000) for the improvement and/or reconstruction of the boat ramp at Corbin Park.</p> <p>Post Falls Project Public Outreach (PF-REC-4):</p> <p>Prepare and implement an Interpretation and Education Plan.</p> <p>Conduct recreational use surveys at the Project every 6 years.</p>	<p>Post Falls/Spokane River Recreation PME</p> <p>Develop the Trailer Park Wave access site and the Corbin Park boat ramp (IDPR, filed 3/6/2007).</p>

Table 2.2.4-1. Proposed Action and stakeholder alternatives measures (continued)

Resource Area	Proposed Action	Alternate Agency/Stakeholder Recommendations
Land Use Measures	<p>Post Falls Project Land Use Management Plan Implementation PME (PF-LU-1):</p> <p>Implement the Project Land Use Management Plan as stipulated under PF-LU-1 in the license application.</p> <p>On and adjacent to the Project, provide assistance and financial support for enforcement of land- and water-based laws and regulations administered by federal, state, local, and tribal governments.</p> <p>Project Boundary Modifications:</p> <p>At Post Falls Project, add 2,352 acres (currently within the 2,128-foot contour) and remove 0.5 acre of private land east of the abandoned Corbin Ditch.</p>	<p>Post Falls Project Land Use Management Plan Implementation PME:</p> <p>Implement the Land Use Management Plan (PF-LU-1) (IDFG, filed 03/12/2007).</p> <p>Determine Avista's liability for fire and other damages to National Forest System Lands in accordance with standard L-Form Articles 22 and 24 of the license (USDA Forest Service modified 4(e), filed 8/18/2006).</p> <p>Identify Avista as responsible for identifying and reporting to the Forest Service all known or observed hazardous conditions on or directly affecting Forest Service lands (USDA Forest Service modified 4(e), filed 8/18/2006).</p> <p>Project Boundary Modifications: N/A</p>
Aesthetic Resource Measures	<p>Post Falls Project Aesthetic Flows (PF-AES-1):</p> <p>Provide aesthetic flows at 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.</p>	
Other Project-Wide Measures	<p>Facilities and Administrative Support:</p> <p>Purchase and maintain a boat for PME measures at Post Falls Project (total cost shared 50/50 with Spokane River Developments).</p> <p>Provide for administrative overhead costs for new PME measures; provide support office staff time and expenses.</p>	<p>License Terms:</p> <p>Issue one 30-year license for the Post Falls Project and Spokane River Developments (Coeur d'Alene Tribe, filed 3/6/2007; NWA, filed 3/4/2007).</p>

Table 2.2.4-1. Proposed Action and stakeholder alternatives measures (continued)

Resource Area	Proposed Action	Alternate Agency/Stakeholder Recommendations
SPOKANE RIVER PROJECT		
Operational Measures	Flow Regime/Lake Levels:	Flow Regime/Lake Levels
	Continue to provide aesthetic flows year-round at Monroe Street Development and initiate aesthetic flows seasonally at Post Falls Project and Upper Falls Development.	Release a minimum instream flow of at least 200 cfs from Upper Falls Dam for aesthetic viewing at downtown falls, through midnight and modify channel to spread flow across riverbed (Sierra Club, filed 7/17/2006).
	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 deviate from the way the Project has been operated in recent years.	Provide a minimum instream flow sufficient to achieve significant aesthetic values for waterfall viewing (CELP, filed 7/17/2006).
	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.	
	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, and implement channel restoration as feasible to enhance visual conditions (SRP-AES-1).	
	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 (SRP-AES-1).	

Table 2.2.4-1. Proposed Action and stakeholder alternatives measures (continued)

Resource Area	Proposed Action	Alternate Agency/Stakeholder Recommendations
Geology and Soils Measures	<p>Erosion:</p> <p>Support additional habitat management and enhancement activities on new Project lands as well as on existing Project land that may include erosion control (Lake Spokane/Nine Mile Terrestrial, Riparian and Wetland Habitat Protection and Enhancement PME (SRP-TR-1).</p> <p>Sedimentation:</p> <p>Support regional efforts to reduce erosion (and downstream sedimentation) in the Hangman Creek Watershed (SRP-TR-1).</p>	<p>Erosion Control:</p> <p>Prepare, fund, and implement an Erosion Control, Prevention, and Restoration Program for Lake Spokane (The Sierra Club and Lands Council, filed 7/17/2006).</p> <p>Prepare, fund, and implement an Erosion Control, Prevention, and Restoration Program for Lake Spokane and Nine Mile Reservoir (WDFW 10(j), filed 7/18/2006).</p> <p>Sedimentation:</p> <p>Develop a Sediment Management Plan for Nine Mile and Long Lake Reservoirs (WDOE, filed 7/17/2006).</p> <p>Develop a Sediment Management Plan for Nine Mile Reservoir and Lake Spokane (WDFW 10(j), filed 7/18/2006).</p> <p>Study reservoir sedimentation and development measures to reduce sedimentation problems for Nine Mile and Lake Spokane (Sierra Club, filed 7/17/2006; The Lands Council, filed 7/17/2006).</p> <p>Implement measures to prevent or reduce erosion on Lake Spokane (Long Lake Reservoir) (Sierra Club, filed 7/17/2006; The Lands Council, filed 7/17/2006).</p>

Table 2.2.4-1. Proposed Action and stakeholder alternatives measures (continued)

Resource Area	Proposed Action	Alternate Agency/Stakeholder Recommendations
Water Resource Measures	<p>TDG Control and Mitigation Program (SRP-WQ-1): Develop and implement a TDG Control and Mitigation Program, including spill gate operating protocols, ongoing TDG monitoring and evaluation, and a comprehensive Long Lake Development TDG Abatement Plan.</p> <p>Washington Water Quality PME (SRP-WQ-2): Develop and implement a Water Quality Monitoring Program.</p>	<p>Washington Water Quality PME: Undertake a Water Rights Protection Program (Sierra Club, filed 7/17/2006). Undertake projects to improved DO in Long Lake Reservoir and downstream (Sierra Club, filed 7/17/2006; The Lands Council, filed 7/17/2006). Require Avista to undertake measures to minimize TDG downstream of dams (Sierra Club, filed 7/17/2006; The Lands Council, filed 7/17/2006). Continue the DO Enhancement Plan for Long Lake Dam for 10 years instead of 5 years and submit the plan for approval within 5 years of license issuance. \$50,000 is insufficient to provide adequate funding for a feasibility study to improve DO levels downstream of Long Lake Development (CELP, filed 7/17/2006). Obtain NPDES permits for dams (Sierra Club, filed 7/17/2006; The Lands Council, filed 7/17/2006). Study, identify, and implement remedies for meeting water standards for temperature (Sierra Club, filed 7/17/2006). Install and operate water quality monitoring stations downstream of Post Falls and Long Lake Dams (Sierra Club, filed 7/17/2006).</p>

Table 2.2.4-1. Proposed Action and stakeholder alternatives measures (continued)

Resource Area	Proposed Action	Alternate Agency/Stakeholder Recommendations
Aquatic Resource Measures	<p data-bbox="493 337 1050 365">Spokane River Fish PME Program (SRP-AR-1):</p> <p data-bbox="493 381 1157 440">Provide for fish population and aquatic habitat protection and enhancement efforts on the Spokane River and Lake Spokane.</p> <p data-bbox="493 461 1157 578">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.</p> <p data-bbox="493 599 1157 657">Lake Spokane Aquatic Weed Management Program PME (SRP-AR-2):</p> <p data-bbox="493 673 1157 821">Implement site-specific and general weed control measures in Lake Spokane, including potential use of bottom barriers to maintain public access sites. Attempt periodic winter drawdowns of 10 to 14 feet to assist in managing weeds in Lake Spokane.</p>	<p data-bbox="1188 337 1598 365">Spokane River Fish PME Program:</p> <p data-bbox="1188 381 1814 440">Salmonid Fisheries Management Plan (WDFW 10(j), filed 7/18/2006).</p> <p data-bbox="1188 461 1881 578">Fund and implement population and habitat protection efforts for native resident trout in the Spokane River within 1 year of a new license (Sierra Club, filed 7/17/2006, The Lands Council, filed 7/17/2006).</p> <p data-bbox="1188 599 1835 657">Conduct a Spawning Gravel Management Program (WDFW modified 10(j), filed 3/6/2007).</p>

Table 2.2.4-1. Proposed Action and stakeholder alternatives measures (continued)

Resource Area	Proposed Action	Alternate Agency/Stakeholder Recommendations
Aquatic Resource Measures (cont)		<p data-bbox="1188 337 1822 391">Conduct a Fishery Enhancement/Supplementation Program (WDFW modified 10(j), filed 3/6/2007).</p> <p data-bbox="1188 415 1835 501">Conduct a Fisheries Public Outreach and Education Program specific to the protection of wild trout in the Spokane River (WDFW modified 10(j), filed 3/6/2007)</p> <p data-bbox="1188 526 1854 612">Implement a Native Resident Trout Enhancement Program for Coeur d'Alene Lake and the Spokane River (Sierra Club, filed 7/17/2006).</p> <p data-bbox="1188 636 1860 722">Develop a mitigation program to address Project impacts to the benthic community in the Spokane River (Sierra Club, filed 7/17/2006).</p> <p data-bbox="1188 745 1871 799">Establish a habitat restoration/mitigation trust fund (Sierra Club, filed 7/17/2006; The Lands Council, filed 7/17/2006).</p> <p data-bbox="1188 821 1629 849">Spokane River Aquatic Weed Control:</p> <p data-bbox="1188 872 1881 958">Conduct an Aquatic Weed Management Program focused on monitoring and control of invasive plant species in the Nine Mile and Lake Spokane areas (WDFW modified 10(j), filed 3/6/2007).</p>

Table 2.2.4-1. Proposed Action and stakeholder alternatives measures (continued)

Resource Area	Proposed Action	Alternate Agency/Stakeholder Recommendations
Terrestrial Resource Measures	<p data-bbox="489 337 1171 423">Lake Spokane/Nine Mile Terrestrial, Riparian and Wetlands Habitat Protection and Enhancement PME (SRP-TR-1):</p> <p data-bbox="489 444 1171 531">Secure appropriate property protection for, and implement, new wetland enhancement or restoration efforts adjacent to or near the Nine Mile or Long Lake Developments.</p> <p data-bbox="489 552 1171 605">Project Transmission Line Management Program PME (SRP-TR-2):</p> <p data-bbox="489 626 1171 776">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.</p>	<p data-bbox="1182 337 1906 391">Lake Spokane/Nine Mile Terrestrial, Riparian and Wetlands Habitat Protection and Enhancement PME:</p> <p data-bbox="1182 412 1906 498">Enhance and restore 42.51 acres of wetlands along Long Lake, Little Spokane River, or Hangman Creek (WDOE, filed 7/17/2006).</p> <p data-bbox="1182 519 1906 638">Protect and manage all Avista-owned land in the vicinity of Lake Spokane for the purposes of preserving wildlife habitat and include these lands in the Project boundary (approximately 1,976 acres) (WDFW 10(j), filed 7/18/2006; revised 3/6/07).</p> <p data-bbox="1182 659 1906 777">Provide funds to purchase 300 acres of shoreline property and wetland habitat contiguous with Lake Spokane and other Avista-owned property that is to be managed for wildlife purposes (WDFW 10(j), filed 7/18/2006; revised 3/6/07).</p> <p data-bbox="1182 799 1906 852">Prepare an Upland Habitat Protection/Enhancement Plan at Long Lake Reservoir (USFWS (10(j), filed 7/18/2006).</p>

Table 2.2.4-1. Proposed Action and stakeholder alternatives measures (continued)

Resource Area	Proposed Action	Alternate Agency/Stakeholder Recommendations
Terrestrial Resource Measures (cont)		<p>Bald Eagles:</p> <p>Develop and implement an Education and Interpretive Program to inform the public about bald eagle use (USFWS 10(j), filed 7/18/2006).</p> <p>Annually monitor bald eagle nests for occupancy and nesting productivity (USFWS 10(j), filed 7/18/2006).</p> <p>Annually survey for new bald eagle nests in the vicinity of the Projects (USFWS 10(j), filed 7/18/2006).</p> <p>Develop Bald Eagle Nest Management Plans and monitor actual bald eagle use (USFWS 10(j), filed 7/18/2006).</p> <p>Noxious Weeds:</p> <p>Develop a management plan to control noxious weeds on Project lands (DOI, USFWS, 10(j), filed 7/18/2006).</p>
Cultural Resource Measures	<p>HPMP (SRP-CR-1):</p> <p>Develop and implement the HPMP.</p>	
Recreation Resource Measures	<p>Spokane River Project Recreation Plan (SRP-REC-1):</p> <p>Develop and implement a Project Recreation Plan that encompasses the various recreation PME measures and consult with appropriate parties.</p> <p>Spokane River Recreation PME (SRP-REC-2):</p> <p>Continue to manage Huntington Park at Monroe Street Development as a natural area/buffer.</p>	

Table 2.2.4-1. Proposed Action and stakeholder alternatives measures (continued)

Resource Area	Proposed Action	Alternate Agency/Stakeholder Recommendations
Recreation Resource Measures (cont)	<p>Provide funds (not to exceed \$20,000) for developing the Water Avenue access site. Enter into a separate agreement with the City of Spokane to provide \$5,000 annual O&M costs.</p> <p>Spokane River Public Outreach PME (SRP-REC-3): Prepare and implement an Interpretation and Education Plan. Conduct recreational use surveys at the Project every 6 years.</p> <p>Lake Spokane/Nine Mile Reservoir Recreation PME (SRP-REC-4): Enter into a separate agreement with Washington State Parks or transfer ownership of the Nine Mile Cottages. Remove the cottage compound from the Project area because it does not serve Project purposes. Provide funds (not to exceed \$150,000) to develop an interpretative center at Nine Mile Development and relocate the existing Nine Mile overlook. Provide \$20,000 annual O&M costs. Provide funds (not to exceed \$25,000) to redevelop the interpretive displays at the Spokane House. Develop and identify the Nine Mile portage, including parking and signs. Provide funds (not to exceed \$15,000) for developing the measure and provide \$5,000 annual O&M costs.</p>	<p>If the intent of the Commission staff recommendation is that Avista should be responsible for costs associated with extending the Centennial Trail, the WSPRC would be willing to allow its lands, upon which the trail would be located, to be brought into the Project boundary (WSPRC, filed 2/21/2007).</p> <p>Implement the Spokane River Development recreation measures (DOI, filed 3/5/2007).</p>

Table 2.2.4-1. Proposed Action and stakeholder alternatives measures (continued)

Resource Area	Proposed Action	Alternate Agency/Stakeholder Recommendations
Recreation Resource Measures (cont)	Provide funds (not to exceed \$100,000) to extend the Centennial Trail from Sontag Park to Nine Mile Resort.	
	Provide funds (not to exceed \$250,000) to reconfigure Nine Mile Resort as a day-use area to complement Washington State Parks' proposed new campground at Riverside State Park.	
	Provide funds (not to exceed \$140,000) to WDNR to expand its Lake Spokane Campground. Provide \$30,000 annual O&M costs.	
	Provide funds (not to exceed \$50,000) to identify and develop up to 10 boat-in-only semi-primitive campsites on Lake Spokane. Provide \$10,000 annual O&M costs.	
	Provide funds (not to exceed \$50,000) to redevelop, operate, and maintain the Long Lake Dam overlook. Provide \$10,000 annual O&M costs.	
	Provide funds (not to exceed \$10,000) to develop a carry-in boat launch immediately downstream from the Long Lake Dam picnic area. Provide \$5,000 annual O&M costs.	
	Provide parking, hiking, and watchable-wildlife opportunities at the Devil's Gap Trailhead and surrounding area; provide \$5,000 annual O&M costs.	
	Provide funds (not to exceed \$300,000 every 10 years after the initial projects are completed) to ensure continued public access and development of new and/or reconstructed recreation facilities at the Project.	

Table 2.2.4-1. Proposed Action and stakeholder alternatives measures (continued)

Resource Area	Proposed Action	Alternate Agency/Stakeholder Recommendations
Land Use Measures	<p>Project Land Use Management Plan Implementation PME (SRP-LU-1):</p> <p>Implement the Project Land Use Management Plan, as stipulated under SRP-LU-1 in the license application.</p> <p>On and adjacent to the Project, provide assistance and financial support for enforcement of land- and water-based laws and regulations administered by governments within their jurisdictions.</p> <p>Project Boundary Modifications:</p> <p>At Upper Falls and Monroe Street Developments, remove 2.8 acres that serve no Project purpose.</p> <p>At Nine Mile Development, remove 66 acres that serve no Project purpose.</p> <p>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.</p> <p>Seek to acquire a portion of property within 300 feet of Lake Spokane shoreline (approximately 47 acres) and manage for habitat protection (SRP-TR-1).</p> <p>Incorporate into the Project boundary Avista-owned lands within 200 feet of the Lake Spokane shoreline (approximately 320 acres) and manage as appropriate under the Land Use Management Plan (SRP-TR-1).</p>	Project Boundary Modifications: N/A

Table 2.2.4-1. Proposed Action and stakeholder alternatives measures (continued)

Resource Area	Proposed Action	Alternate Agency/Stakeholder Recommendations
Aesthetic Resource Measures	<p>Spokane River Project Aesthetic Flows PME (SRP-AES-1):</p> <p>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, and implement channel restoration as feasible to enhance visual conditions.</p> <p>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.</p>	<p>Spokane River Project Aesthetic Flows PME:</p> <p>Release a minimum instream flow of at least 500 cfs from Upper Falls Dam for aesthetic viewing at downtown falls, from 5 a.m. until midnight, year-round and modify channel to spread flow across riverbed (Sierra Club, CELP, filed 3/6/2007).</p>
Other Project Wide Measures	<p>Facilities and Administrative Support:</p> <p>Purchase and maintain a boat for PME measures (total cost 50/50 with Post Falls Project).</p> <p>Provide for administrative overhead costs for new PME measures; support office staff time and expenses associated with new PME measures.</p>	

2.3.1 Staff's Modification to the Proposed Action

After evaluating the Proposed Action, including mandatory conditions filed pursuant to sections 4(e) and 18 of the FPA, and other recommendations from resource agencies and interested entities under sections 10(a) and 10(j) of the FPA, we considered what, if any, additional measures would be necessary or appropriate for continued operation of the Projects. The Staff Alternative consists of the Proposed Action (section 2.2) with the adoption of other environmental measures recommended by agencies and stakeholders as well as staff. In section 5.1 of Chapter 5.0, we summarize measures proposed by Avista that we recommend and these new measures, as well as our rationale.

2.3.2 Section 18 Fishway Prescriptions

Pursuant to section 18 of the FPA, DOI filed its proposal to reserve the authority to prescribe the construction, operation, and maintenance of fishways in the future during the term of the license in its July 18, 2006, submittal.

2.3.3 Section 4(e) Conditions

Section 4(e) of the FPA provides that any license issued by the Commission for a project within a federal reservation should 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. The existing Post Falls Project occupies lands owned by the United States and held in trust for the Coeur d'Alene Indian Tribe.

In a July 18, 2006, filing with the Commission, DOI, on behalf of the BIA, submitted preliminary terms and conditions pursuant to section 4(e) of the FPA. On May 17, 2007, Interior filed with the Commission modified terms, conditions, and prescriptions for the Project. The conditions consist of specific environmental measures, summarized below, as well as administrative conditions that pertain to aspects of Avista's use of BIA-managed reservation lands. Because the administrative conditions are not environmental measures, we do not analyze them in this FEIS.

The USDA Forest Service submitted its preliminary section 4(e) conditions in its July 14, 2006, filing, but later modified those conditions in its August 18, 2006, filing. 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 Project are its final terms, conditions, and prescriptions. All of the August 18, 2006, conditions were determined to be administrative and legal conditions. Because the administrative conditions are not environmental measures, we do not analyze them in this FEIS.

Environmental Measures

The DOI-modified 4(e) environmental conditions are summarized below:

Modified Condition (MC) 2: Coeur d'Alene Lake and Tributary Shoreline Erosion Control—Avista should conduct an Erosion Inventory and Assessment, which would include an inventory of all erosion sites on the St. Joe River and reservation. Based on the inventory and assessment, Avista should develop for approval by the Secretary of the Interior an Erosion Control Design Plan outlining how Avista would control 50 percent of erosion on reservation shorelines on the St. Joe River and 30 percent of erosion on reservation shorelines on Coeur d'Alene Lake. In addition, Avista should prepare an Erosion Control Implementation Plan for approval by the Secretary of the Interior. Upon approval, Avista should then implement construction of all erosion control designs within 4 years. Avista should also conduct additional erosion inventories over the course of the license term to document whether additional erosion sites develop in the future.

MC 3: Water Quality Standards and Water Quality Monitoring—Avista should conduct the water monitoring and modeling program designed by BIA to adequately identify and assess Project effects on water quality in the southern portion of the lake within the reservation. Included in the water monitoring program are seven parameters (total nitrogen; nitrite + nitrate; ammonia; total, dissolved, and ortho phosphorus; and chlorophyll-*a*) to be measured at five sites, including one site in Benewah Lake and one in Round Lake, following specifics outlined by BIA. In addition, continuous monitoring of temperature, specific conductance, potential hydrogen (pH), and DO; twice-monthly water column profiles; continuous meteorological station data; and monitoring of other limnological data should be measured at specified sites. Avista should then report the data collected within 30 working days after collection or laboratory analysis and should promptly respond to tribal requests regarding such data. Every 5 years, Avista should update the water quality models of the Project-affected waters above Post Falls Dam to assess the Project's contribution to exceedance of water quality standards.

MC 4: Protection of Cultural Resources—Avista should conduct ongoing monitoring to ensure that impacts to cultural properties on the reservation within the area of potential effects (APE) are identified and addressed throughout the license term. Avista should protect cultural sites and properties on the reservation within the APE from illegal scavenging and collecting as defined in the Initial Cultural Resource Response Program and the Cultural Resource Management Plan, of which BIA retains the authority to approve. Avista should fund the long-term storage and curation of cultural resources in the tribe's facility, including any necessary upgrade and expansion of that facility.

MC 5: Aquatic Weed Management—Avista, in collaboration with the Coeur d’Alene Tribe, should prepare for approval by the Secretary of the Interior a Coeur d’Alene Indian Reservation Aquatic Weed Management Plan to control exotic and noxious aquatic weeds in waters affected by the Project that are within and adjoining the Coeur d’Alene Indian Reservation. The plan should include: (1) annual fall surveys to assess and map infestation and distribution of exotic and noxious aquatic weeds, (2) management actions, based on the annual survey results, specific to each identified weed for implementation the following spring, (3) a survey and implementation schedule, (4) coordination with management of other resources, and (5) criteria to measure progress of control of each identified weed.

MC 6: Wetland and Riparian Habitat Replacement and Maintenance—Avista should restore and/or replace 3,488 acres of emergent scrub-shrub and/or forested wetlands on or off the reservation within the first 10 years of the license.

Administrative / Legal Measures

MCs filed by DOI that we consider administrative or legal in nature include the following:

- MC 1: Avista should prepare an Implementation and Monitoring Plan for the Secretary of the Interior’s approval for Avista activities required by the license regarding how it intends to comply with the DOI’s section 4(e) conditions 2 through 6. The Implementation and Monitoring Plan should include: (1) an Erosion Inventory and Assessment Plan, (2) a Water Quality Monitoring Plan, and (3) an Aquatic Weed Management Plan. Avista should prepare annual reports of information relating to implementation and monitoring requirements, including (a) progress reports on shoreline erosion control, (b) results of water quality monitoring and reviews of the Water Quality Monitoring Plan, (c) results of water quality modeling, (d) a summary of activities conducted for Protection of Cultural Resources Condition, (e) results of an annual survey of aquatic weeds, and (f) an Annual Work Plan detailing the coming year’s expected activities as applicable to activities related to DOI section 4(e) conditions 2 through 6.
- MC 7: Avista will collaborate with the tribe to formulate plans and actions and resolve disputes in a manner that is acceptable to both parties.
- MC 8: For plans requiring approval of the Secretary of the Interior, such approval will be obtained before the plan is filed with FERC.

- MC 9: When written notice is required, Avista will provide written notice to the Secretary (or designee), the tribe, the chairman of the tribal council, the administrative director of the tribe, and the director of the tribe's Natural Resources Department; in emergencies, a phone call should be made to the parties, followed by written notice.
- MC 10: Avista will allow a representative of the Coeur d'Alene Tribe and DOI access to, through, and across Project lands and works for inspection after proper credentials have been shown, advance notice given, and safety measures followed.
- MC 11: The Secretary of the Interior can accept or reject, in whole or in part, Avista's submissions; upon rejection, Avista shall have 45 days to resubmit the rejected portion.
- MC 12: Avista's performance of all requirements of these conditions shall be consistent with the purposes of section 4(e) of the FPA to ensure that the reservation is adequately protected and utilized and that the Project does not interfere with, or is not inconsistent with, the purposes for which the reservation was established.
- MC 13: These conditions are not intended to modify/alter any rights held by the Coeur d'Alene Tribe under applicable federal or tribal law.
- MC 14: the Secretary of the Interior reserves the authority to review Avista's compliance with any requirement of these conditions and may seek permissible remedies under the FPA or other laws if Avista is found to be noncompliant. Avista would implement, upon order of FERC, additional measures identified by the Secretary pursuant to section 4(e) authority, as necessary to ensure adequate protection and utilization of the Coeur d'Alene Indian Reservation.

Conditions filed by the USDA Forest Service that we consider administrative or legal in nature include the following:

- MC 1: Avista shall obtain written approval from the USDA Forest Service for all final design plans for recreational improvements specified in PF-REC-2 before such improvements are implemented on National Forest System lands.
- MC 2: Avista shall indemnify, defend, and hold the United States harmless for any damages or losses sustained by the United States during construction of the recreational improvements specified in PF-REC-2 and for judgments, claims, or demands assessed against the United States in connection with the construction of such improvements.

- MC 3: Avista's liability for fire and other damages to National Forest System lands shall be determined in accordance with L-Form Articles 22 and 24 of the license.
- MC 4: During construction, Avista is responsible for identifying and reporting to the USDA Forest Service all known or observed hazardous conditions affecting such lands, recreational improvements, or resources, or any conditions that pose a risk of injury to individuals.

2.3.4 Section 401 Water Quality Certificate Conditions

Avista filed an application for Water Quality Certification to the Washington Department of Ecology (WDOE) and Idaho Department of Environmental Quality (IDEQ) for the Projects on July 12, 2006, as required under section 401(a)(1) of the Federal Water Pollution Control Act (Clean Water Act [CWA]). Neither WDOE nor IDEQ responded to the applications or submitted section 401 conditions. Therefore, Avista withdrew its July 12, 2006, applications and reapplied for 401 certification with IDEQ on June 5, 2007, and WDOE on June 13, 2007. Certifications are pending.

2.3.5 Section 10(j) Recommendations

Under section 10(j) of the FPA, each hydroelectric license issued by the Commission must 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. The Commission is required to include these conditions unless it determines that they are inconsistent with the purposes and requirements of the FPA or other applicable law. The USFWS, WDFW, and IDFG filed recommendations pursuant to section 10(j) in July 2006. In March 2007, the USFWS, WDFW, and IDFG filed modifications to their original section 10(j) recommendations.

2.3.6 Avista Alternative Section 4(e) Conditions under the Energy Policy Act of 2005

In accordance with the EAct of 2005, Avista filed a request for a trial-type hearing with DOI on August 17, 2006. As part of that request, Avista filed a series of 12 alternative conditions, or countermeasures, to DOI's (4)(e) preliminary conditions filed July 18, 2006. The DOI referred the matter to an ALJ on October 6, 2006. On January 8, 2007, the ALJ issued his opinion on disputed factual issues. DOI considered the judge's opinion in formulating its modified 4(e) conditions filed with the Commission on May 7, 2007. These modified 4(e) conditions are analyzed in this FEIS.

2.4 ALTERNATIVES CONSIDERED BUT ELIMINATED FROM FURTHER CONSIDERATION

We also considered other alternatives to the Proposed Action, but eliminated them from detailed study because they are not considered reasonable under the circumstances of this case. These alternatives include: (1) federal takeover; (2) issuance of a non-power license; (3) retirement of the Project; and (4) implementation of a natural hydrograph alternative at the Post Falls Project. We discuss the rationale for eliminating these alternatives from detailed study in the following sections.

2.4.1 Federal Takeover

In accordance with section 16.14 of the Commission's regulations, a federal department or agency may file a recommendation that the United States exercise its right to take over a hydroelectric project with a license that is subject to sections 14 and 15 of the FPA (16 U.S.C. sections 791(a) – 825(r)). Federal takeover and operation of the Projects would require Congressional approval. No party has suggested that federal takeover would be appropriate, and no federal agency has expressed interest in operating the Project. In this case, we do not consider federal takeover to be a reasonable alternative.

2.4.2 Issuance of a Nonpower License

A nonpower license is a temporary license that the Commission would terminate whenever it determines that another governmental agency is authorized and willing to assume regulatory authority and supervision over the lands and facilities covered by the nonpower license. At this time, no government agency has suggested a willingness or ability to take over the Projects. No party has sought a nonpower license, and we have no basis for concluding that the Projects should no longer be used to produce power. Thus, we do not consider a nonpower license to be a reasonable alternative.

2.4.3 Retirement of the Projects

Retiring the Projects would involve denying the relicense application and surrendering or terminating the existing license with appropriate conditions. Termination or surrender of the existing license would entail one of two Project retirement alternatives—without dam removal or with dam removal.

Project Retirement Without Dam Removal

Project retirement without dam removal would involve retaining the dams and reservoirs, while disabling or removing equipment used to generate electricity. This option would result in the loss of the Project's energy production, system

operating benefits, tax revenues, and operation-related employment and would require the Commission to identify another government agency willing and able to assume regulatory control and supervision of the remaining facilities. The changes to Project operations and the additional measures proposed by Avista and any required by the Commission at relicensing would not occur. This retirement option avoids the temporary adverse impacts of dam removal, but it also precludes the long-term benefits of the additional measures proposed by Avista or required by the Commission at relicensing. No agency or other party has recommended this alternative. Moreover, Avista customers and the Spokane metropolitan region rely, in part, on the power generated by the Projects, and decommissioning the Projects would require a source of replacement power, which has not been identified. Because decommissioning in-place provides no incremental benefits to any resource area different from other alternatives we examine in detail, eliminates the power benefit, and still continues a maintenance cost burden, we do not consider this decommissioning alternative further.

Project Retirement With Dam Removal

Removal of the Project works would also provide no significant benefits over other alternatives we evaluate in detail. This alternative would also involve several significant adverse effects in addition to the loss of generation capacity. Most significantly, it would involve management of accumulated sediment behind Nine Mile Dam and at the upper end of Lake Spokane by either dredging or release downstream. Sediment management alternatives would involve potentially significant adverse environmental and economic impacts. Potential environmental effects include mobilization of stored and immobilized contaminants behind the dams, increased turbidity and sedimentation, and lowered water quality in the Spokane River. It would also involve conversion of flatwater resources to riverine resources. Because Project retirement with removal of the Project facilities would induce a significantly higher economic and environmental cost than other alternatives and has not been recommended by any of the resource agencies, we do not evaluate this alternative further.

2.4.4 Natural Hydrograph Alternative

Several stakeholders participating in the ALP expressed an interest in demonstrating how the river and environment would be different if the Post Falls Project ceased operating in the manner it does and Coeur d'Alene Lake and the Spokane River were allowed to function under natural flow conditions. In response, Avista used the same modeling that was used to evaluate lake levels and river flows under current Project operations (No Action) and under the Proposed Action to make a preliminary evaluation of the effects of a scenario commonly referred to as the Natural Hydrograph Alternative at the Post Falls Project.

Under this alternative, the Post Falls Project would continue to operate and produce power, but under a significantly revised operating regime. The development would be operated in a manner that allowed Coeur d'Alene Lake levels and Spokane River flows to be determined solely by inflows and the lake's natural outlet restriction. No minimum flow would be provided by the Post Falls Project. The other four Spokane River developments would operate as they would under the No-Action Alternative, although this operation would be predicated upon the modified flow regime.

Under typical hydrologic conditions (i.e., in most years), flows under the natural hydrograph in the Spokane River downstream of Post Falls would be noticeably lower between September and January relative to current Project operations. From February through May, flows under the natural hydrograph alternative would be similar to current Project operations. From June through August, flows would be higher under the natural hydrograph in most years.

The Natural Hydrograph Alternative would have both beneficial and adverse effects on fish populations downstream of Post Falls Project as compared to current and proposed operations. In wet years, sufficient water would likely be available to provide higher flows downstream of Post Falls Project from spring through summer, providing a benefit to spawning, rearing, and foraging rainbow trout. In warm, low-water years, however, flows downstream of Post Falls under the natural hydrograph could potentially be significantly less than under current and proposed operations. Storing water in Coeur d'Alene Lake allows Avista to release water slowly through the Post Falls Project throughout the summer months. Under a natural hydrograph, less water would be stored in the lake, and the Spokane River downstream of Post Falls Dam would have significantly less water in some years than under existing conditions. Adverse flow and temperature effects on native fish populations could be substantial in the Spokane River between the Post Falls Project and Sullivan Road—notably in the vicinity of Barker Road, where stream flows would likely be very low during some warm, low-water years.

Under typical hydrologic conditions, Coeur d'Alene Lake would be significantly lower than under current Project operations (more than 1 foot) from June through January. From February through May, lake levels under the natural hydrograph alternative would be much more similar to current Project operations. The greatest difference would occur during August and September, when the lake level under current typical hydrologic conditions would be approximately 8 feet higher than under the Natural Hydrograph Alternative.

The loss of storage and head would lead to a loss of generation. Under the Natural Hydrograph Alternative, average annual energy at the Post Falls Project would drop approximately 6,800 MWh. This is equivalent to an average drop in

energy of less than 1 MW. Average annual energy production at the four downstream developments would also drop, by approximately an additional 3 MW. Avista would need to make up these losses from other energy sources.

Staff evaluated the Natural Hydrograph Alternative within the context of the current collaborative process and concluded that this alternative is not reasonable for the following reasons:

- The majority of stakeholders participating in the ALP did not view it as a reasonable alternative.
- This alternative would have adverse socioeconomic effects that would more than offset any gains to some resources.
- The shoreline of Coeur d'Alene Lake would be lowered by 2 to 8 vertical feet in the summer period, and these dewatered areas would adversely affect residential, recreational, and commercial users whose development and use patterns are designed around the current lake level regime.

For these reasons, we do not consider a Natural Hydrograph Alternative at the Post Falls Project to be a reasonable alternative.