May 7, 2010

Ms. Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First St. N.E.
Washington, DC 20426

Subject: **Spokane River Project, FERC Project No. 2545**
Submittal of the Bald Eagle Management Plan,
As Required by Article 414 of the Commission's June 18, 2009 Order

Dear Secretary Bose:

On June 18, 2009 the Federal Energy Regulatory Commission (FERC) issued a new license for the Spokane River Hydroelectric Project, FERC Project No. 2545 (License). Article 414 of the License requires Avista to submit a Bald Eagle Management Plan (Plan) for FERC review and approval within one year of License issuance.

In accordance with the License, Avista consulted with the Idaho Department of Fish and Game, the Washington Department of Fish and Wildlife, and the US Fish and Wildlife Service as it prepared the Plan. Copies of their comments and recommendations, and Avista's responses to them, are included in the Plan's Appendices.

With this, Avista is submitting the enclosed Plan to FERC for approval. Upon FERC's approval Avista will begin implementing the Plan as appropriate. Please feel free to contact me if you have any questions or wish to discuss the Plan. I can be reached at (509) 495-4998.

Sincerely,

Elvin "Speed" Fitzhugh
Spokane River License Manager

Enclosure

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AVISTA CORPORATION

BALD EAGLE MANAGEMENT PLAN

FERC LICENSE ARTICLE 414

Spokane River Hydroelectric Project
FERC Project No. 2545

Prepared By:
Golder Associates, Inc.

May 7, 2010

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Glossary

Key use sites A subset of essential habitat features within the nesting-season home range to include nest trees, night roosts, and primary perches.

Monitoring area The area that encompasses bald eagle nest sites associated with waters impounded by the Project.

Nest occupancy The activity status of a nest as encompassed by the following definitions:

Active	Two adults present in a territory containing a nest during the nesting season; or one adult observed incubating, with young, or near a known nest.
Active, not successful	An occupied territory where no young were produced.
Not active	No nesting activity and no adults in a nesting territory.
Abandoned	Bald eagles were observed in the nesting territory, but deserted or stopped attending the nest, and did not subsequently return and successfully raise young in the nest for the duration of the breeding season.
Successful	One or more young fledged from the nest.
Status unknown	Territory not checked or incompletely checked to determine occupancy.
Active, success unknown	Occupied territory not adequately monitored to determine success.

Nest productivity The total number of young produced divided by the number of times a territory was occupied.

Planning area This definition pertains to the geographic area associated with the requirement to prepare and file (with FERC) site-specific bald eagle nest management plans. The planning area includes Avista-owned lands where an active or alternate nest associated with waters impounded by the Project is present, and select additional nesting territories where investigations indicate that (1) Project operations may have negative effects on bald eagle productivity or habitats, and (2) opportunities for protection are available.

Project activities and Project operations Actions directly associated with the generation of power and fulfillment of license requirements. Such activities may include, but are not limited to, maintenance at Project facilities, actions affecting flows or water elevations, and actions (such as the development of recreation sites, aquatic weed management, etc.) required as a condition of the new license.

Project boundary The boundary that delineates lands and waters affected by the Project as defined in the FERC-issued Order Issuing New License and Approving Annual Charges for Use of Reservation Lands.

Project lands Lands above the normal full pool elevation (or the ordinary high water mark for non-impounded areas), but within the Project boundary.

Project waters Areas below the normal full pool elevation (or the ordinary high water mark for non-impounded areas), but within the Project boundary.

Primary use area Habitats that a bald eagle pair (individually or collectively) occupies for greater than 75 percent of the time recorded during the investigation, as delineated by a time-budget investigation.

Survey area This definition pertains to the geographic area associated with annual surveys for new nests. The survey area includes all habitats with suitable nesting substrates within the monitoring area. Suitable nesting substrates include mature trees and/or rock cliffs or outcrops.

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1.0 INTRODUCTION

This bald eagle management plan describes the monitoring, surveys and investigations that Avista will undertake as directed under Article 414 of the new license for the Spokane River Project (FERC 2009). This plan encompasses bald eagle nests associated with waters impounded by the Spokane River Project, and includes a framework for the following tasks:

- Annual occupancy and productivity monitoring
- Annual surveys to identify new nests
- Investigations to identify bald eagle nesting territories including primary use areas, home ranges, and key use sites

This plan also describes the schedule for filing annual reports containing the results of bald eagle monitoring with the U.S. Fish and Wildlife Service (FWS), Idaho Department of Fish and Game (IDFG), Washington Department of Fish and Wildlife (WDFW), and the Federal Energy Regulatory Commission (FERC). In addition, it includes a schedule for filing site-specific management plans for select individual nesting territories with FWS, IDFG, WDFW and FERC.

1.1 Background

The Spokane River Project (Project) consists of five hydroelectric developments (HEDs) located on the Spokane River in northern Idaho (in Kootenai and Benewah Counties) and eastern Washington (in Spokane, Stevens, and Lincoln Counties). The five HEDs, from upstream to downstream, include:

- Post Falls (River Mile [RM] 102)
- Upper Falls (RM 74.2)
- Monroe Street (RM 74)
- Nine Mile (RM 58)
- Long Lake (RM 34)

The FERC-licensed boundary for the Project encompasses 44,556 acres, and generally follows the normal full pool elevation of the impoundments associated with each HED (Figures 1 and 2). Additional lands included within the boundary consist of Project dams, powerhouses, tailraces, and recreation facilities. Lands owned by Avista above the normal full pool elevation, but within the Project boundary include approximately: 41 acres at the Post Falls HED, 0.125 acres at the Upper Falls HED, 6 acres at the Monroe Street HED, 10 acres at the Nine Mile HED, and 724 acres at the Long Lake HED.

An original license for the Project was issued to the Washington Water Power Company (now named Avista) on August 17, 1972. In 1981, FERC amended the license to include the Post Falls development. The original license for the Spokane River Project expired on August 1, 2007. FERC issued the Order Issuing New License and Approving Annual Charges for Use of Reservation Lands on June 18, 2009 (FERC 2009).

Article 414 of the new license requires the development of a bald eagle management plan as follows:

> Article 414 Bald Eagle Management Plan. *Within one year of license issuance, the licensee shall file, for Commission approval, a bald eagle management plan. The plan shall contain measures for surveying, monitoring, and protecting bald eagles*
>
> *The plan shall include at a minimum: (1) annual monitoring during the bald eagle nesting season (about February 1 to July 31) of all known bald eagle nests that are associated with waters impounded by the project to determine nesting occupancy and productivity; (2) annual surveys to identify new bald eagles nests using, in part, a combination of fixed winged aircraft and watercraft to conduct the surveys; (3) monitoring over two consecutive nesting seasons to identify bald eagle nesting territories including primary use areas, home ranges, and key use sites (nest stands, perch sites, and roost sites); (4) a schedule for filing annual monitoring reports with the U.S. Fish and Wildlife Service (Fish and Wildlife Service), Idaho Department of Fish and Game (Idaho Fish and Game), Washington Department of Fish and Wildlife (Washington DFW), and the Commission with the results of its monitoring and survey activities required above; and (5) a schedule for filing, with the Fish and Wildlife Service, Idaho Fish and Game, Washington DFW, and the Commission, site-specific management plans for individual nesting territories that include any proposed measures to reduce bald eagle/human conflicts that may occur on project lands.*
>
> *The licensee shall prepare the plan after consultation with the Fish and Wildlife Service, Idaho Fish and Game, and Washington DFW. The licensee shall include with the plan documentation of agency consultation, copies of comments and recommendations on the completed plan after it has been prepared and provided to the agencies, and specific descriptions of how the agencies' comments are accommodated by the plan. The licensee shall allow a minimum of 30 days for the agencies to comment and to make recommendations before filing the plan with the Commission. If the licensee does not adopt a recommendation, the filing shall include the licensee's reasons, based on site-specific information.*
>
> *The Commission reserves the right to require changes to the plan. The plan shall not be implemented until the licensee is notified by the Commission that the plan is approved. Upon Commission approval, the licensee shall implement the plan, including any changes required by the Commission.* (FERC 2009)

1.2 Objectives

This plan describes Avista's framework for implementing each of the requirements of Article 414. The following sections of the plan address specific objectives of Article 414, as follows:

- Section 2.0 describes Avista's plan to monitor occupancy and productivity annually for all bald eagle nests associated with waters impounded by the Project.
- Section 3.0 describes Avista's plan for annual surveys to identify new bald eagle nests associated with waters impounded by the Project.
- Section 4.0 describes Avista's plan to collect two consecutive seasons of habitat-use information for nests associated with Project waters (i.e. nesting territory, primary use area, home range, and key use sites).
- Section 7.0 describes Avista's schedule for filing annual reports that convey information from the above surveys with the FWS, IDFG, WDFW, and FERC.
- Section 7.0 also describes Avista's schedule for filing site-specific management plans for individual nesting territories within the planning area that identify measures to reduce bald eagle/human conflicts that may occur on Project lands.

The quality assurance and data management procedures under which monitoring, surveys and investigations will take place are described within Section 5.0 and the contents of the annual bald eagle monitoring report and nest site investigation report are outlined within Section 6.0.

1.3 Coordination and Adaptive Management

The long-term nature of this monitoring effort necessitates an adaptive approach, wherein information from ongoing monitoring is used to inform adjustments to methods. Avista will meet with FWS, IDFG and WDFW on an annual basis to discuss the results of the previous season's monitoring effort and make adjustments to monitoring, survey and investigation methods as needed. Changes to the methods and schedules described within this management plan will be based on mutual agreement among FWS, IDFG, WDFW and Avista.

1.4 Monitoring and Planning Areas

Monitoring, surveys and investigations will include all nests associated with waters impounded by the Spokane River Project; however, neither FERC nor Avista have authority to enforce bald eagle management actions outside of Project lands. For this reason, the development of site-specific management plans for individual nesting territories will focus on nests that occur on Avista-owned lands, and a subset of nests where investigations indicate that (1) Project operations may have negative effects on bald eagle productivity or habitats, and (2) opportunities for protection are available.

The following definitions describe the geographic scope of the monitoring and planning effort:

Monitoring Area *The area that encompasses bald eagle nest sites associated with waters impounded by the Project.*

In general, this area extends ½ mile beyond the boundaries of the Project. In Washington, bald eagles nest an average of 0.12 miles from river shorelines, and 0.19 miles from lake shorelines (Stinson et al. 2001). Grubb (1980) found that Washington bald eagle nests averaged 0.05 miles from open water (range 0 – 0.5 miles). In some cases, however, the monitoring area may encompass nests greater than ½ mile from the Project boundary where the nesting pair is known or suspected to forage within waters impounded by the Project. In other cases, the monitoring area may exclude habitats that lie within ½ mile of the Project boundary, but are not suitable for bald eagle nesting. As new nests are discovered during the course of monitoring, Avista will coordinate with FWS, IDFG and WDFW to determine whether the nest sites are associated with waters impounded by the Project. Adjustments to the monitoring area will be made with the concurrence of FWS, IDFG and WDFW during the annual coordination meeting (see Section 1.3).

Planning Area *This definition pertains to the geographic area associated with the requirement to prepare and file (with FERC) site-specific management plans for bald eagle nests.* The planning area includes *Avista-owned lands where an active or alternate nest associated with waters impounded by the Project is present, and select additional nesting territories where investigations indicate that (1) Project operations may have negative effects on bald eagle productivity or habitats, and (2) opportunities for protection are available.*

Three nest sites associated with waters impounded by the Project are known to occur on Avista-owned lands. Site-specific management plans will be developed for each of these nest sites. New nests discovered on Avista-owned lands during the course of monitoring will be added to the planning area.

Avista will coordinate with FWS, IDFG and WDFW to identify nests within the monitoring area, but outside of Avista-owned lands, that may be appropriate to include in the planning area. These may include nests where opportunities for protection are available and information collected during habitat-use investigations indicates that Project operations directly affect the productivity of nesting eagles or available habitat. Direct effects will be determined based on data indicating nest failure or abandonment as a result of Project activities, or information demonstrating that Project operation poses a threat to nest trees, primary perches, or other key use sites.

1.5 OVERVIEW OF KNOWN NESTING TERRITORIES

1.5.1 Idaho

Sixteen nesting territories appear to be associated with waters impounded by the Project in Idaho. These consist of 14 territories that include nests within ½ mile of the Project boundary, and two territories where nests lie greater than ½ mile from the Project boundary, but nesting eagles forage within Project waters (Figure 1; Table 1).

Table 1

Bald Eagle Nests Known From the Monitoring Area in Idaho

Territory Name	Nest Identifier	Location	Land Ownership	Within Current Planning Area	Notes
Post Falls Dam	07108001	Spokane River upstream of Post Falls Development	Avista	Yes	
Cougar Bay	07103501 07103502	South side of Cougar Bay on Coeur d'Alene Lake	Federal (BLM) and Private	No	Nests 07103501 and 07103502 appear to represent alternate nests within one nesting territory. Nest 07103502 is located on private land.
Eddyville	07107701	South side of Wolf Lodge Bay on Coeur d'Alene Lake	Private	No	
Mica Bay	07105401	Mica Bay on Coeur d'Alene Lake	Private	No	
Turner Bay	07106601 07106602 07106603	Turner Bay on Coeur d'Alene Lake	Private	No	Nests 07106601, 07106602 and 07106603 are located in close proximity and appear to represent alternate nests within the same territory.
Windy Bay	08100101	North side of Windy Bay on Coeur d'Alene Lake	Private	No	
Heyburn State Park	07105701 07105702	West side of Chatcolet Lake	State (Idaho Dept. of Parks and Recreation)	No	Located within Heyburn State Park. Nests 07105701 and 07105702 appear to represent alternate nests within the same nesting territory.
Anderson Lake	07103101	Between Anderson Lake and the Coeur d'Alene River	Private	No	
Swan Lake	07102001 07102002	Between Swan Lake and the Coeur d'Alene River	Private	No	Nests 07102001 and 07102002 appear to represent alternate nests within the same nesting territory.

Territory Name	Nest Identifier	Location	Land Ownership	Within Current Planning Area	Notes
Blessing Slough	07107601	North of the Coeur d'Alene River	State (Idaho Department of Fish and Game)	No	
Rainy Hill	07107401	East side of Medicine Lake	Private	No	
Killarney Lake	07101702	North side of the Coeur d'Alene River	State (Idaho Department of Fish and Game)	No	
Mission Slough	07101901	North side of the Coeur d'Alene River	Private	No	This nest number includes two separate nests located over ½ mile north of the boundary along the Coeur d'Alene River. FWS biologists suspect that this nesting pair forages within waters impounded by the Project.
St. Maries	07104301	West side of the St. Maries River	Private	No	
Turtle Lake	07102401 07102402	South side of the St. Joe River	Private	No	This territory includes two alternate nests.
Falls Creek	07103702	North side of the St. Joe River	Private	No	This nest is located over ½ mile east of the Project boundary along the St. Joe River. FWS biologists suspect that this nesting pair forages within waters impounded by the Project.

1.5.2 Washington

Three nesting territories appear to be associated with waters impounded by the Project in Washington. All are located within ½ mile of the boundary for the Long Lake HED (Figure 2; Table 2).

Table 2

Bald Eagle Nests Known from the Monitoring Area in Washington

Territory Name	Nest Identifier	Location	Land Ownership	Within Current Planning Area	Notes
Charles - Maas	63053 63054	South of Long Lake within Riverside State Park	State (Washington State Parks and Recreation)	No	Two nests are mapped for this territory, both within Riverside State Park.
Whalen	62972 62973	South of Long Lake, near Tum Tum, WA	Avista / Private	Yes	Two nests are mapped for this territory; one lies on Avista-owned lands, and the other lies immediately outside of Avista-owned lands.
Long Lake South	62207 62208	South of Long Lake, approximately two miles upstream of the Long Lake Dam	Avista	Yes	Two nests are mapped for this territory.

2.0 PLAN FOR ANNUAL OCCUPANCY AND PRODUCTIVITY MONITORING

2.1 Territories Monitored

Annual occupancy and productivity monitoring will include all known nesting territories with active or alternate nests inside the monitoring area. At present, most bald eagle nests associated with Project waters occur within ½ mile of the Project boundary; however, two nesting territories are found more than ½ mile upstream of waters impounded by the Project, but are used by breeding pairs suspected to forage downstream within Project waters. These territories include two nests apparently used by one nesting pair on the Coeur d'Alene River and one nest upstream of the Project boundary on the St. Joe River (Figure 1). Based on the foraging behavior of the breeding pairs, these territories may be associated with waters impounded by the Project and will be included within annual occupancy and productivity monitoring.

Any new nesting territories identified within the monitoring area during surveys to locate new nests (see Section 3.0) will be added to annual occupancy and productivity monitoring the first full nesting season following initial identification. These nests will continue to be monitored annually (as appropriate) for the duration of the license.

Avista will make reasonable efforts to secure permission to enter private lands where such access is necessary to obtain occupancy and productivity data. Avista will pursue other reasonable means to collect occupancy and productivity data if access to private lands is not granted. Other reasonable means for collecting occupancy and productivity data may include: exchanging information with local resource managers (USFS, BLM, IDFG, and WDFW biologists); targeting the nest for concentrated observation during aerial surveys for new nests (see Section 3.0); identifying additional vantage points from which to observe the nest; or directly securing information on eagle presence and activity from the landowner. If the quality or completeness of the monitoring data is compromised as a result of access limitations, Avista will coordinate with FWS, IDGF and WDFW to identify alternate approaches for meeting plan objectives.

2.2 Monitoring Schedule

Monitoring for occupancy and productivity will commence the first full nesting season following FERC approval of the bald eagle management plan. Monitoring will occur annually between February 1st and July 31st. As additional nests are discovered during annual surveys, they will be incorporated into the monitoring schedule. New nests will be added to occupancy and productivity monitoring the first full nesting season following their discovery and will be monitored thereafter (as appropriate) for the duration of the license. Currently, IDFG monitors bald eagle nests on a five-year rotation (i.e. each nest is monitored for one season out of each five-year period).

2.3 Monitoring Methods

The following methods represent standard practices with respect to determining occupancy and productivity at bald eagle nesting territories. These methods are intended as guidelines to facilitate consistency in annual data collection. Professional judgment may be used to modify or adapt these methods as site-specific circumstances require. Proposed changes to monitoring methods will be reviewed during the annual coordination meeting with FWS, IDFG and WDFW.

Each known nest will be observed on a minimum of three occasions during the nesting season to determine occupancy and productivity as shown in Table 3. The initial observation may take place concurrently with surveys for new nests (see Section 3.0).

TABLE 3

Schedule for Occupancy and Productivity Monitoring

Date Range for Observations	Primary Purpose
February 1st through March 31st	Initial determination of occupancy
April 1st through June 15th	Update of nesting status
June 15th through July 31st	Determination of productivity

Nest observations will be most effective if conducted during morning hours from first light to mid–morning. Observations may require up to 1 hour when determining occupancy and longer when determining productivity (depending on the vantage point and the activity of fledglings). High resolution optics will be used to facilitate observations. When feasible, observations may be conducted from aircraft. Land-based observations will take place from a vehicle to avoid disturbance to eagles whenever possible. If a nest must be approached on foot, observers will remain 330 feet from the nest and/or hidden from view. Observers will retreat if eagles display agitated behavior.

During each visit, observers will record data pertinent to the determination of nest occupancy and productivity, such as:

- Nest condition
- Nest repair or construction
- Presence and behavior of adults
- Incubation or brooding posture
- Number of eggs (where visible)
- Number and age of young (standardized through the use of an aging key, e.g. Carpenter [1990])

The determination of productivity will be made during the final nest visit. Young observed in flight will be documented; however, at this stage (late-stage nestling to fledgling) mortality is generally low (Jackman and Jenkins 2004) and young noted in the nest during the last visit will be assumed to successfully fledge.

Observers will also note any habitat alterations or activities that have occurred near the nest site that may have affected eagle productivity. All data will be recorded on standardized field data forms (see Section 6.0; Appendix A).

2.4 Determinations for Each Nesting Territory

Based on the results of observations, one of the following determinations will be made for each monitored nest (Jackman and Jenkins 2004; FWS 2007):

Active *Two adults present in a territory containing a nest during the nesting season; or one adult observed incubating, with young, or near a known nest.*

"Active" is a transitional designation, such that a nest that is deemed "Active" at the beginning of the nesting season will receive a determination of "Successful", "Active, Not Successful", "Nest Abandoned", or "Active, Success Unknown" at the completion of monitoring.

Active, Not Successful *An occupied territory where no young were produced.*

When the "Active, Not Successful" determination is used, observers will determine the cause of reproductive failure (where possible), and will note this cause in the annual report.

Not Active *No nesting activity and no adults in a nesting territory.*

When the "Not Active" determination is used, observers will record any modifications or disturbances to habitat that have occurred near the nest site, and the distance to those disturbances. The nature, extent and proximity of habitat modifications/disturbances will be included in the annual report.

Nest Abandoned *Bald eagles were observed in the nesting territory, but deserted or stopped attending the nest, and did not subsequently return and successfully raise young in the nest for the duration of the breeding season.*

When the "Nest Abandoned" determination is used, observers will document activities and/or habitat alterations that may have contributed to abandonment of the nest. The annual report will include information on the nature, extent, and location of such activities or habitat alterations.

Successful *One or more young fledged from the nest.*

When the “Successful” determination is used, the annual report will include the number of eagles fledged from the nest.

Status Unknown *Territory not checked or incompletely checked to determine occupancy.*

The use of the “Status Unknown” determination will require an explanation of why the territory was not checked or why observations were not adequate to determine occupancy. The annual report will include recommendations to allow for adequate observations during subsequent monitoring.

Active, Success Unknown *Occupied territory not adequately monitored to determine success.*

The use of this determination will require an explanation as to why the territory was not adequately monitored to determine success. The annual report will include recommendations to rectify inadequacies in subsequent monitoring.

3.0 PLAN FOR ANNUAL SURVEYS TO IDENTIFY NEW NESTS

3.1 Survey Area

Surveys to identify new nests will encompass all habitats with suitable nesting substrates within the monitoring area. Suitable nesting substrates include mature trees and/or rock cliffs or outcrops (WDFW 2001; FWS 2007).

In the course of field activities, staff from IDFG, FWS or WDFW may identify potential new bald eagle nests. Avista will coordinate with these agencies prior to the annual survey to identify potential locations of new nests. These areas will receive particular attention during annual surveys to identify new nests.

3.2 Survey Schedule

Surveys to identify new nests will commence the first full nesting season following FERC approval of the bald eagle management plan. Surveys will take place annually between February 1st and March 31st, and may take place concurrently with the initial observations to document occupancy of known nests.

3.3 Survey Methods

The following methods represent standard practices for surveys to identify new bald eagle nesting territories. These methods are intended as guidelines to facilitate consistency in data collection. Professional judgment may be used to modify or adapt these methods as site-specific circumstances require. Proposed changes to survey methods will be reviewed during the annual coordination meeting with FWS, IDFG and WDFW.

Biologists will choose an appropriate survey method that allows an efficient search of suitable nesting substrates. Methods may include surveys from fixed-wing aircraft, watercraft, or land-based vehicle. A combination of these survey types may be used to effectively search potential nesting substrates.

Fixed-wing aircraft will be used to search for new nests at least once within each five-year period. Survey aircraft should seek to maintain a search height of 500 feet or closer above tree level and a speed of 60 to 80 mph. One or more experienced observers will search for and record the location of new nests. GPS technology will facilitate the collection of accurate location data.

Surveys for new nests may be conducted from watercraft where a water-based vantage provides more efficient or effective access to potential nesting substrates. Land-based searches may be appropriate where aircraft or watercraft cannot effectively search potential nesting substrates. Land-based searches should be conducted from within a vehicle where possible, as observers on foot are more likely to elicit an agitated response from nesting eagles (Jackman and Jenkins 2004; FWS 2007). If indications of nesting

are inconclusive using one survey method, biologists will follow up with an alternate method to determine whether a new nest is present.

3.4 Documentation of New Nests

Participants in the annual survey for new bald eagle nests will record the date(s) and times that surveys took place and weather and visibility conditions during surveys. The method or methods used to search for nests and the areas searched by each method will be documented. Documentation for any new nest, or suspected new nest, encountered during surveys will include a minimum of two nest photographs, maps and descriptive information indicating nest location, nest condition, and proximity to known nests. Observers will also record any significant habitat alteration that has taken place within the monitoring area during the time since the last survey (e.g. catastrophic fire). All data will be recorded on standardized field data forms (see Section 6.0; Appendix A).

4.0 PLAN FOR INVESTIGATIONS TO IDENTIFY NESTING TERRITORIES AND ASSOCIATED PRIMARY USE AREAS, HOME RANGES, AND KEY USE SITES

4.1 Nests Included

Investigations to identify nesting territories and associated primary use areas, home ranges, and key use sites will encompass all known bald eagle nesting territories that include active or alternate nests within the monitoring area. Any new nesting territories documented within the monitoring area during the course of annual surveys to identify new nests will be added to habitat-use investigations when an opening becomes available in the schedule (see Section 8.2). Nesting territories may be omitted from investigation if a site-specific nest management plan is currently in place and/or if home ranges, primary use areas, and key use sites are already known. Avista will coordinate with FWS, IDFG, and WDFW to determine whether habitat-use data or site-specific nest management plans are available for known nesting territories. Avista will only omit nesting territories from investigation based on mutual agreement with FWS, IDFG and WDFW.

4.2 Schedule

Habitat-use investigations will commence the first full nesting season following FERC approval of the bald eagle management plan. Based on the intensity of the effort required to identify nesting territories and associated primary use areas, home ranges, and key use sites, Avista will investigate two nesting territories during the initial year to refine methods. During subsequent years, a minimum of four territories will be investigated each nesting season until each active territory within the monitoring area is characterized. New nests will be added to the schedule as openings become available. The maximum number of territories included each season will be determined by the ability of Avista to collect quality habitat-use data from each of the territories under investigation.

4.3 Methods

The following methods represent recommended procedures to identify nesting territories, including primary use areas, home ranges, and key use sites. These methods are intended as guidelines to facilitate consistency in data collection. Professional judgment may be used to modify or adapt these methods as site-specific circumstances require. Proposed changes to these methods will be reviewed during the annual coordination meeting with FWS, IDFG and WDFW.

Observers will collect two nesting seasons of habitat-use data at each nest within the monitoring area. Observation periods will be scheduled once every two weeks for each nest under investigation from March 1st through July 31st. Observation periods will occur from either (1) first light to mid-morning

(10:00 am), or (2) 3 hours before sunset to dusk. A combination of morning and evening observation data will be collected for each territory under investigation.

One or more observers will follow nesting eagles from the territory as far as safely and legally possible during the observation period. Observations may be conducted from water and/or land, and observers will use a variety of vantage points over the nesting season to encompass use areas.

During each observation period, eagle activity will be recorded on standardized data forms in a time-interval format referenced to locations marked on a 7.5-minute quadrangle map or recorded in a GPS. A separate time-interval record will be created each time the eagle under observation changes location or activity. The following information will be documented for each time-interval record:

- Begin and end time
- Eagle (female, male, or juvenile)
- Location (referenced to map/GPS)
- Activity
- Perch type

Time-interval records that encompass foraging observations will include the following information:

- Attack mode
- Success
- Estimated distance from perch
- Estimated distance from shore
- Prey type
- Prey status (carrion or live)
- Aquatic habitat used (cove, tributary, open water, etc.)

If a time interval includes observations of agitated behavior by an eagle or the occurrence of potentially disruptive activities in proximity to an eagle under observation, the observer will record the following:

- Eagle behavior (e.g. vocalization, flushing, none, etc.)
- Distance to disturbance
- Type of disturbance
- Duration of disturbance

Observers will summarize habitat use by the number of minutes each eagle spent using each habitat feature. Time-interval records that include observations of agitated behavior will be summarized by the type of disturbance, frequency, duration, and distance to the source of agitation. To facilitate analysis, locations and habitat features referenced during the investigation will be entered into a spatially-linked database.

4.4 Analysis

Bald eagle nesting territories, including primary use areas and home ranges, may be delineated from the data collected during the field investigation using one of several methods. Methods that produce contours defining the intensity of activity in a given area may be most useful. These include local nearest neighbor, adaptive kernel, and density isopleths methods (Worton 1989; Kenward et al. 2001; Getz and Wilmers 2004). Key use sites will be defined as a subset of essential habitat features within the nesting-season home range (e.g. nest trees, night roosts, primary perches).

5.0 DATA MANAGEMENT AND QUALITY ASSURANCE

All data will be collected and managed under a quality assurance program, which will consist of the following elements:

- Field observations will be collected on standardized data forms (see Appendix A).
- A unique nest identifier will be included on the front and back of each data form.
- Data forms will be initialed by the observer.
- Field data will be reviewed for errors and omissions.
- Reviewers will initial data forms to indicate completion of review.
- Original data forms will be retained in Project files.
- Original data forms will be scanned and stored electronically.
- Data from reviewed forms will be entered into a central database that includes standardized spatially-linked fields (i.e. Excel with spatial coordinates, shapefile, or geodatabase).
- Avista will maintain all Project files and electronic data.
- Access to the database will be limited to necessary personnel.

6.0 REPORTS

The results of studies described in Sections 2.0, 3.0 and 4.0 will be contained in two reports, an annual monitoring report and a nest site investigation report. The monitoring report will include the results of annual occupancy and productivity monitoring and surveys for new nests (see Sections 2.0 and 3.0). The nest site investigation report will include the status and results of habitat-use investigations (see Section 4.0). When completed, site-specific management plans (for eagle nests within the planning area) will be included as appendices to the nest site investigation report.

6.1 Annual Monitoring Report

The annual monitoring report will contain the results of occupancy and productivity monitoring and surveys to identify new nests. This report will also summarize the status of ongoing habitat-use investigations. Associated with the annual monitoring report, Avista will provide FWS, IDFG and WDFW with electronic files (Excel, geodatabase, or shapefile) that include territory locations linked to monitoring data (e.g. survey dates, nest determinations, productivity) and the location of new nests and related data. Spatial data provided to the agencies will also include the Project boundary, Project lands, and survey locations and routes.

6.1.1 Occupancy and Productivity Monitoring

The results of occupancy and productivity monitoring will be included in the annual monitoring report and will consist of a brief narrative and tables/maps with the following information:

- The location of territories monitored
- Dates of monitoring
- Determinations for each nest, including occupancy and number of young fledged
- Factors that have affected occupancy or productivity during the current nesting season (e.g. nest blow down, tree condition, habitat alteration, competition, disturbance, etc.)

6.1.2 Surveys to Identify New Nests

The results of surveys to identify new nests will be included in the annual monitoring report and will consist of a brief narrative and tables/maps that summarize the following information:

- Survey routes
- Dates of survey
- Survey methods (watercraft, fixed wing, land, etc.)
- Locations of previously undocumented nests
- Photographs of new nests
- Descriptions of new nests
- Relationship of newly identified nests to known nests
- Significant alterations to habitats within the monitoring area that have occurred during the period since last survey and that may affect potential nesting substrates (e.g. catastrophic fire)

6.2 Nest Site Investigation Report

The nest site investigation report will include the results of habitat-use investigations for those nesting territories that are not part of the planning area (see Section 1.4). For nesting territories that are within the planning area, the results of habitat-use investigations will be reported within each site-specific management plan. Site-specific management plans for individual nesting territories will be included as appendices to the nest site investigation report. Associated with the nest site investigation report, Avista will provide FWS, IDFG and WDFW with electronic files (Excel, geodatabase, or shapefile) depicting nesting territories, home ranges, primary use areas, and key use sites. Spatial data provided to the agencies will also include the Project boundary, Project lands, planning area, and survey locations.

6.2.1 Investigations to Identify Nesting Territories and Associated Primary Use Areas, Home Ranges, and Key Use Sites

The results of habitat-use investigations will be described in the nest site investigation report and will include a brief narrative and tables/maps conveying the following information:

- Location of the territories studied
- Study dates and schedules
- Study methods
- Home range estimates
- Primary use areas
- Key use sites (including nest trees, roost trees and primary perches)
- Activities noted during investigations that resulted in disturbance to nesting eagles and/or a reduction in the quality or availability of local nesting habitat

6.2.2 Site-Specific Management Plans

Site-specific management plans for individual nesting territories that are part of the planning area will be included as appendices to the nest site investigation report. Each site-specific plan will briefly describe investigation methods, and will identify the nesting territory, nesting season home range, associated primary use areas, and key sites used during nesting.

Based on data from the habitat-use investigation, site-specific management plans will identify and characterize activities that result in disturbance to nesting eagles. The site-specific management plan will also describe ongoing activities that result in loss or degradation of habitat within a nesting territory. Site-specific bald eagle management plans will include proposed measures to reduce bald eagle/human conflicts based on identified threats. The plans will focus on areas where Avista has the management authority to protect habitat and the ability to enforce seasonal restrictions on activities found to disturb nesting eagles. Associated with the site-specific management plans, Avista will provide FWS, IDFG and WDFW with electronic files (Excel, geodatabase, or shapefile) depicting nesting territories, home ranges, primary use areas, key use sites, and any proposed zones or locations where activities may be restricted to protect nesting eagles.

7.0 SCHEDULE FOR FILING REPORTS

7.1 Agency Contacts

The bald eagle monitoring report and nest site investigation report will be filed with FWS, IDFG, WDFW and FERC. The following primary contacts have been identified within each wildlife management agency:

Idaho Department of Fish and Game (IDFG)
Mary Terra-Berns, Environmental Staff Biologist
Idaho Department of Fish and Game
2885 W. Kathleen Ave, Coeur d'Alene, ID 83814
Tel: (208) 769-1414 Fax: (208) 769-1418
mary.terra-berns@idfg.idaho.gov

Washington Department of Fish and Wildlife (WDFW)
Doug Robison, Region 1 Mitigation Biologist
2315 North Discovery Place
Spokane Valley, WA 99216-1566
Tel: (509) 892-1001 Fax: (509) 921-2440
Howard.Ferguson@dfw.wa.gov

U.S. Fish and Wildlife Service (FWS)
Rick Donaldson
Northern Idaho Field Office, Manager, Conservation Planning
11103 East Montgomery Drive
Spokane Valley, WA 99206
Phone: (509) 893-8009 Fax: (509) 891-6748
Rick_Donaldson@fws.gov

Mark Miller
Eastern Washington Field Office, Assistant Project Leader
11103 East Montgomery Drive
Spokane Valley, WA 99206
Phone: (509) 891-6839 Fax: (509) 891-6748
Mark_Miller@fws.gov

7.2 Schedule for Filing

Bald eagle monitoring and nest site investigation reports will be submitted to FWS, IDFG, WDFW and FERC on or before December 31st. Filling of both reports will begin in 2011 (or the first full year following FERC approval of the bald eagle management plan). The bald eagle monitoring report will be filed annually for the duration of the license. The nest site investigation report will be filed annually until habitat use within each territory has been characterized and site-specific management plans have been prepared for all territories within the planning area. For territories included in the planning area, individual site-specific bald eagle management plans will be filed as appendices to the annual bald eagle report following completion of the second season of study (e.g. Season One 2011, Season Two 2012, site-specific management plan filed as an appendix to the December 31, 2012 nest site investigation report). Table 4 depicts the schedule for conducting monitoring, surveys and investigations and for filing reports.

8.0 REFERENCES

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Federal Energy Regulatory Commission (FERC). 2009. Order Issuing New License and Approving Annual Charges for use of Reservation Lands. Issued June 18, 2009.

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Grubb, T. 1980. An evaluation of bald eagle nesting in western Washington. Pages 87-103 *in* R. L. Knight, G. T. Allen, M. V. Stalmaster, and C. W. Servheen, editors. Proceedings. Washington Bald Eagle Symposium, Seattle, Washington, USA.

Jackman, R and J. Jenkins. 2004. Protocol for Evaluating Bald Eagle Habitat and Populations in California. U.S. Fish and Wildlife Service, Endangered Species Division. Sacramento, CA.

Kenward, R., R. Clarke, K. Hodder and S. Walls. 2001. Density and linkage estimators of home range: nearest-neighbor clustering defines multinuclear cores. Ecology 82:1905-1920.

Stinson, D. W., J. W. Watson, and K. R. McAllister. 2001. Washington State status report for the bald eagle. Washington Department of Fish and Wildlife, Olympia, Washington, USA.

U.S. Fish and Wildlife Service (FWS). 2007. National Bald Eagle Management Guidelines. U.S. Fish and Wildlife Service, May 2007.

Washington Department of Fish and Wildlife (WDFW). 2001. Washington Department of Fish & Wildlife's Priority Habitat and Species Management Recommendations, Volume IV: Birds.

Worton, B. 1989. Kernel methods for estimating the utilization distribution in home-range studies. Ecology 70: 164-168.

TABLE

Table 4
Monitoring and Filing Schedule

Task	2011												2012												2013											
	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D
Annual occupancy and productivity monitoring[1]																																				
Annual surveys to identify new nests[1]																																				
Annual Monitoring Report[1]																																				
Time-budget nest investigations nests 1 - 2																																				
Time-budget nest investigations nests 3 - 4																																				
Time-budget nest investigations nests 5 - 6																																				
Time-budget nest investigations nests 7 - 8																																				
Time-budget nest investigations nests 9 - 10																																				
Time-budget nest investigations nests 11-12																																				
Nest Site Investigation Report [3]																																				

	2014												2015												2016											
	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D
Annual occupancy and productivity monitoring[1]																																				
Annual surveys to identify new nests[1]																																				
Annual Monitoring Report[1]																																				
Time-budget nest investigations nests 1 - 2																																				
Time-budget nest investigations nests 3 - 4																																				
Time-budget nest investigations nests 5 - 6																																				
Time-budget nest investigations nests 7 - 8																																				
Time-budget nest investigations nests 9 - 10																																				
Time-budget nest investigations nests 11-12																																				
Nest Site Investigation Report [3]																																				

	2017												2018												2019											
	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D
Annual occupancy and productivity monitoring[1]																																				
Annual surveys to identify new nests[1]																																				
Annual Monitoring Report[1]																																				
Time-budget nest investigations nests 11-12																																				
Time-budget nest investigations nests 13-14																																				
Time-budget nest investigations nests 15-16																																				
Time-budget nest investigations nests 17-18																																				
Time-budget nest investigations nests 19 +[2]																																				
Nest Site Investigation Report [3]																																				

	2020												2021											
	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D
Annual occupancy and productivity monitoring[1]																								
Annual surveys to identify new nests[1]																								
Annual Monitoring Report[1]																								
Time-budget nest investigations nests 11-12																								
Time-budget nest investigations nests 13-14																								
Time-budget nest investigations nests 15-16																								
Time-budget nest investigations nests 17-18																								
Time-budget nest investigations nests 19 +[2]																								
Nest Site Investigation Report [3]																								

First nest visit - Initial determination of occupancy

Second nest visit - Update of nesting status

Third nest visit - Determination of productivity

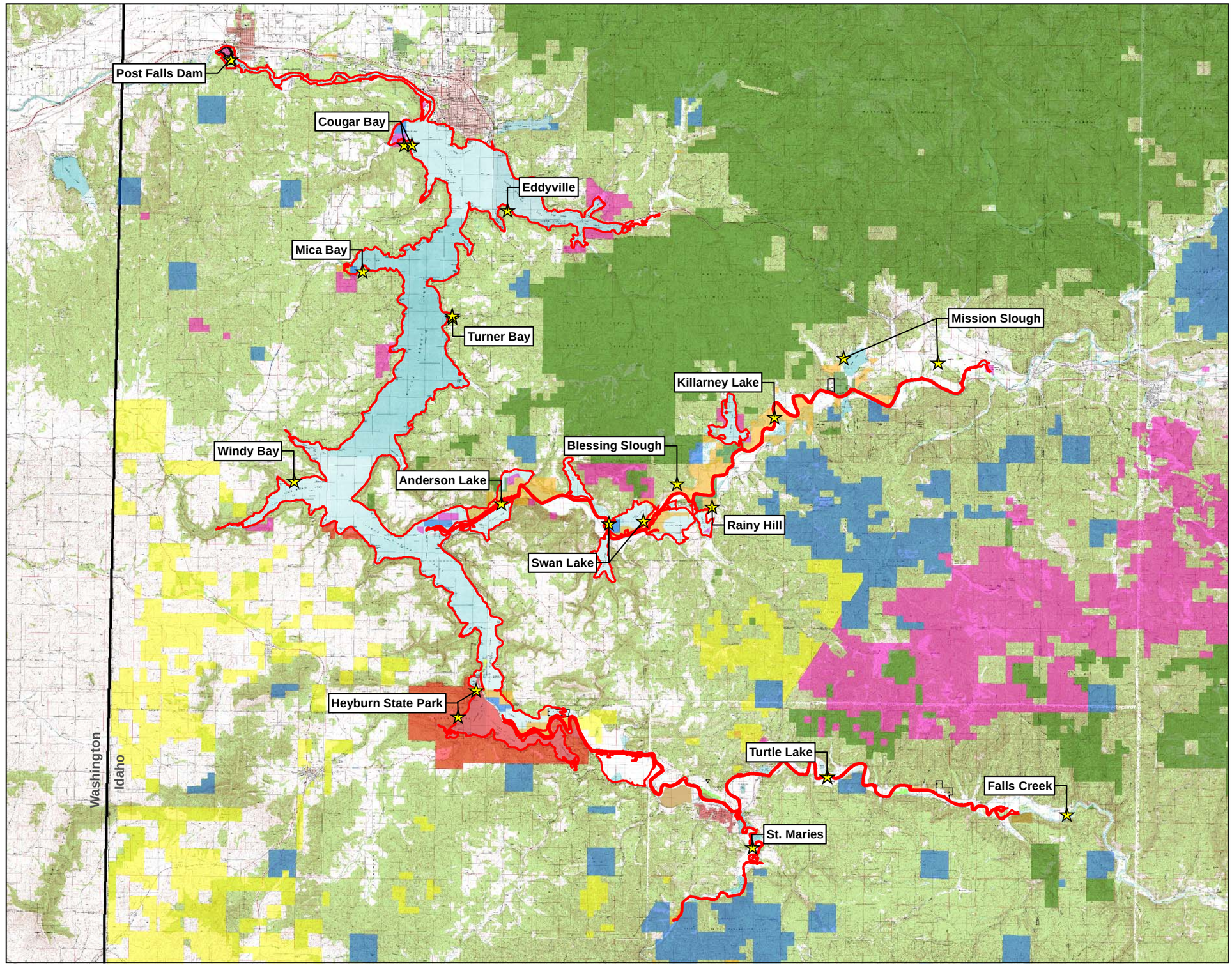
1 - Dates are shown through 2021; however, occupancy and productivity monitoring and surveys to identify new nests will occur annually during the specified time period for the duration of the 50-year license. The annual monitoring report will also be filed annually for the duration of the new license.

2 - The schedule shown assumes time-budget surveys are conducted on two nests during the first season and on four nests per year for the remainder of the investigation. Each nest-site is studied for two seasons. Additional nests encountered during annual surveys will be added to the schedule as capacity becomes available. A minimum of four nests will be investigated during each season (following the initial 2011 season). More than four nests may be investigated during a given year if resources allow.

3 - Nest site investigation reports will be filed by December 31st each year that nest site investigations occur. If four territories are investigated each season (following the 2011 season), and 19 territories are investigated, then this report will be filed through 2021. This schedule may change if additional territories are located or more than four territories are investigated during any year.

Golder Associates

FIGURES



LEGEND

- Bald Eagle Nesting Territory
- Post Falls HED Boundary
- State Boundary

Surface Land Management/Ownership

- Benewah County
- City of St. Maries
- Tribal Land
- Bureau of Land Management
- Idaho Department of Lands
- Idaho Department of Fish and Game
- Idaho Department of Parks and Recreation
- Other Idaho State Agencies
- Forest Service
- Avista-Owned Land

Bald eagle nest location data are confidential and are not for public circulation

Golder Associates

N

0 3.5

Scale in Miles

Map Projection:
Idaho State Plane
West Zone (ft) NAD 1983

Source:
Avista (HED areas, land ownership), ESRI (state boundary), USDA-NRCS (quadrangle county mosaics), Bureau of Land Management (surface land management), Idaho Department of Fish and Game (bald eagle data), Golder Associates Inc.

This figure was originally produced in color. Reproduction in black and white may result in a loss of information.

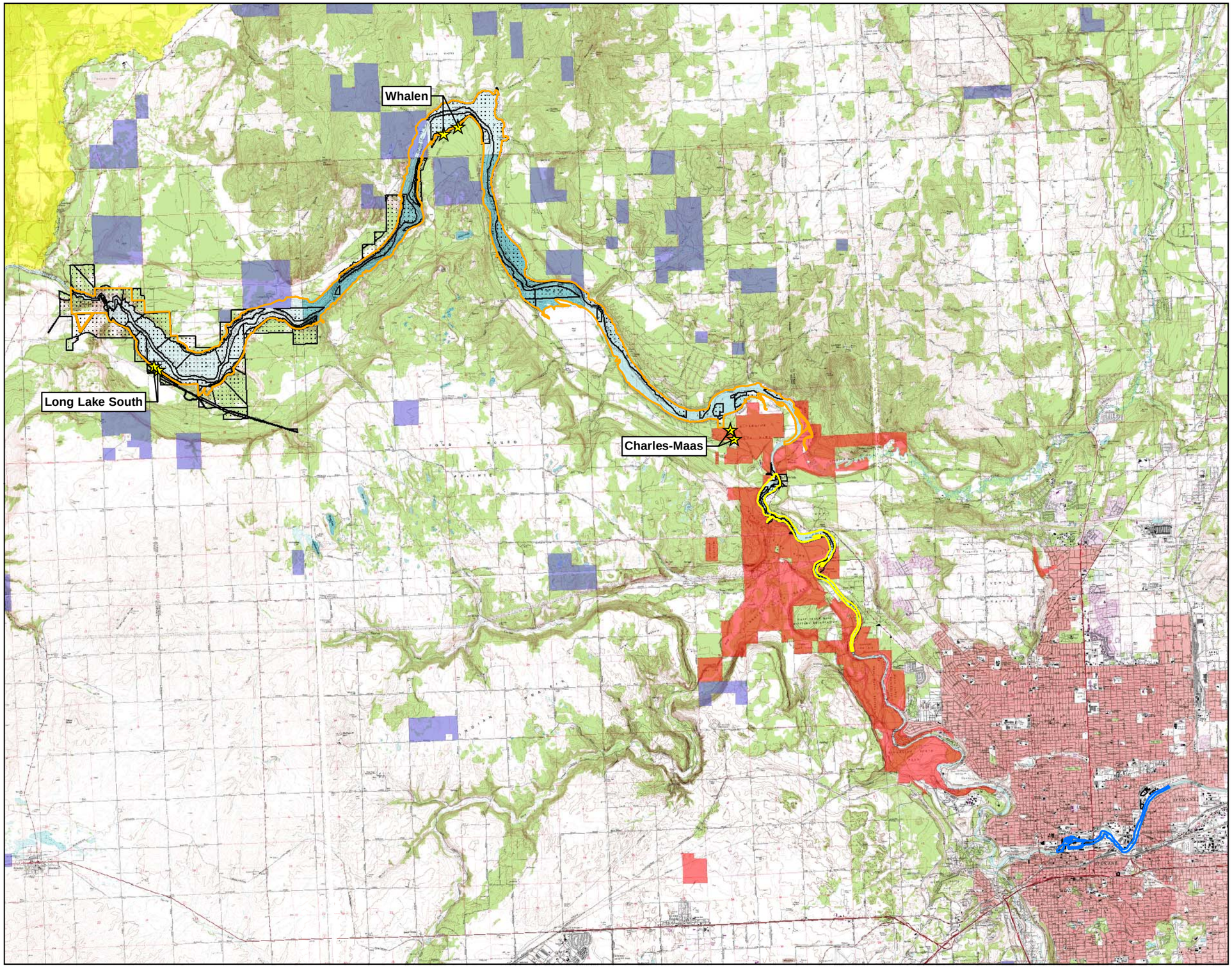
FIGURE **1**

BALD EAGLE NESTING LOCATIONS ASSOCIATED WITH WATERS IMPOUNDED BY THE SPOKANE RIVER PROJECT IN IDAHO

AVISTA/ECOLOGY 401 CERT/WA

0739308101700F10R02_Idaho_Overview.mxd | 4/27/2010 | BVANG-JOHNSON

Golder Associates



LEGEND

- Bald Eagle Nesting Territory
- Monroe St./Upper Falls HED Boundary
- Nine Mile Falls HED Boundary
- Long Lake HED Boundary

Surface Land Management/Ownership

- Tribal Land
- Washington State Land
- Riverside State Park
- Avista-Owned Land

Bald eagle nest location data are confidential and are not for public circulation

Golder Associates

N

0 2

Scale in Miles

Map Projection:
Washington State Plane
North Zone NAD 1983

Source:
Avista (HED areas, land ownership), ESRI (hillshade), USDA-NRCS (quadrangle county mosaics), Bureau of Land Management (surface land management), WDFW (bald eagle nests), Golder Associates Inc.

This figure was originally produced in color. Reproduction in black and white may result in a loss of information.

FIGURE **2**

BALD EAGLE NESTING LOCATIONS ASSOCIATED WITH WATERS IMPOUNDED BY THE SPOKANE RIVER PROJECT IN WASHINGTON

AVISTA/ECOLOGY 401 CERT/WA

APPENDIX A

EXAMPLE OF STANDARDIZED FIELD DATA FORMS

SPOKANE RIVER HYDROELECTRIC PROJECT (FERC Nos. 2545-091 and 12606-000)
RAPTOR NEST RECORD

Species:_____

Territory name (if known):_____

Territory/nest number (if known):_____

Reported by:_____ Date:_____

Location: T _____ R _____ Section _____ ¼ _____ ¼ _____

State:_____ County:_____

Elevation:_____ Aspect:_____

Lat/Lon:_____ Hydrologic unit:_____

Nest stratum:_____ Nest height (circle ft or m):_____

Position on slope:_____ Nest condition:_____

Tree species:_____ Tree height (circle ft or m):_____ DBH (circle in or cm):_____

Land ownership:_____

USGS Quad name:_____

Directions to nest:_____

Comments:_____

Observer Initial:_____ Date:_____ Reviewer Initial:_____ Date:_____

Attach locator map and photos showing nest site and nest*

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SPOKANE RIVER HYDROELECTRIC PROJECT (FERC Nos. 2545-091 and 12606-000)

BALD EAGLE NEST MONITORING FORM

20__

I. ID

Territory Name:_____ Territory/Nest Number:_____Observer Initial:_____Reviewer Initial:_____

II. SURVEY SUMMARY

Survey Code

☐ (1) Not Checked ☐ (2) Not Located ☐ (3) No Initial Occupancy Determination ☐ (4) No Nesting Status Update ☐ (5) Productivity Not Determined
☐ (6) Complete Survey, Productivity Determined

Status Code

☐ (1) Unoccupied ☐ (2) Other Species ☐ (3) Single Adult ☐ (4) Occupied ☐ (5) Active ☐ (6) Unsuccessful ☐ (7) Successful

Nest Condition Code

☐ (1) New ☐ (2) Good ☐ (3) Fair ☐ (4) Poor ☐ (5) Nest Destroyed:_____

Nesting Determination

☐ (1) Status Unknown ☐ (2) Not Active ☐ (3) Nest Abandoned ☐ (4) Active, Not Successful ☐ (5) Active, Success Unknown ☐ (6) Successful

Number of Fledglings:_____ young (at or near fledging age)

III. SURVEY RESULTS

OBSERVATION PERIOD	Date Checked	Nest Condition	Nesting Activity (construction etc.)	Adult Presence / Behavior	Incubation/Brooding Posture	Number of Young	Stage of Young
Initial Determination of Occupancy **February 1 – March 31** (pre-egg laying and early incubation)							
Update Nesting Status **April 1 – June 15** (late incubation and nestlings)							
Determine Productivity **June 15 – July 31** (late nestling and fledging)							

 Territory/Nest Number:_____

IV. SUPPLEMENTAL NESTING INFORMATION (If known)

Date of adult arrival:		**Date of adult dispersal:**	
Date of egg laying:		**Clutch size:**	
Date of hatching:		**Date/Number of fledglings at dispersal:**	
Date of fledging:		**Banding data:**	

V. NARRATIVE INFORMATION

Nesting attempt failed (Yes/No), date/nesting period of failure:_____

Reason for failure:_____

_____

Nest Abandoned (Yes/No), date:_____

Reason for abandonment:_____

_____

Disturbing Activities (record type, duration, and proximity to nest)_____

_____

_____

Habitat Alterations (record type, extent, and proximity to nest) _____

_____

_____

Ongoing Disturbances (record type, extent, and proximity to nest) _____

_____

_____

Prepared by:_____ **Date:**_____

Reviewed by:_____ **Date:**_____

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Spokane River Hydroelectric Project (FERC Nos. 2545-091 and 12606-000)
Time-Budget Observations

Nest Number	
Observer(s)	
Observation Pt	
Date	

Begin time (PST or PDT)		End time (PST or PDT)	
Air Temp		Air Temp	
Cloud cover (from list)		Cloud cover (from list)	
Precip (from list)		Precip (from list)	
Wind (Beaufort Scale)		Wind (Beaufort Scale)	

Wind - Beaufort Scale
0 - Smoke rises vertically
1 - Smoke drifts, leaves rustle
2 - Wind felt on face
3 - Leaves move actively
4 - Dust and small branches move
5 - Small trees sway
6 - Large branches move
7 - Whole trees in motion
8 - Small branches blown off trees

Cloud Cover: Sunny, Hazy, partly Cloudy, or Overcast

Precip: Rain, Rain Showers, Light Rain, Thunderstorms, Drizzle, Snow, Snow Showers, Sleet, None

Activity Codes			
Main		flush	FLS
perch	PER	nest repair	NR
prey capture	PCAP		
adult feeding	AF	***Secondary***	
disturbance	DIST	bill wipe	BW
territory defense	TDEF	drink	DRNK
flight	FLT	defecate	DEF
brood	BRD	preen	PRN
incubate	INC	vocalize	VCL
feed young	FY		

Begin time	Eagle (male, female, juvenile)	Location[1]	Main Activity (from list)	Sec. Activity (from list)	Prey Species/ Status	Type of Potential Disturbance	Distance to Potential Disturbance	Duration of Potential Disturbance	End Time	Comments

Observer:_____
Reviewed:_____

Nest/Territory:_____

Golder Associates

Spokane River Hydroelectric Project (FERC Nos. 2545-091 and 12606-000)
Time-Budget Observations

Begin time	Eagle (male, female, juvenile)	Location[1]	Main Activity (from list)	Sec. Activity (from list)	Prey Species/ Status	Type of Potential Disturbance	Distance to Potential Disturbance	Duration of Potential Disturbance	End Time	Comments

1 - Attach map or reference to GPS recorded location. For foraging locations, include distance from shore and aquatic habitat used.

Observer:_____
Reviewed:_____

Nest/Territory:_____

Golder Associates

APPENDIX B

RECORD OF COMMUNICATION WITH WILDLIFE MANAGEMENT AGENCIES DURING PREPARATION OF DRAFT PLAN

APPENDIX B
Record of Communication with Wildlife Management Agencies During Preparation of Draft Plan

Date	To / From	Agency	Individual	Method	Content
12/3/2009	To	Idaho Department of Fish and Game Idaho Fish and Wildlife Information System	George Stephens	email	Request for bald eagle records in the Spokane River Project vicinity (1/2 mile of boundary)
12/3/2009	To	Washington Department of Fish and Wildlife – Priority Habitats and Species Database	Lori Guggenmos	email	Request for bald eagle records in the Spokane River Project vicinity (1/2 mile of boundary)
12/7/2009	From	Washington Department of Fish and Wildlife – Priority Habitats and Species Database	Lori Guggenmos	email	Explanation of a five to six week turn-around time for data requests
12/10/2009	From	Idaho Department of Fish and Game Idaho Fish and Wildlife Information System	Nikki Wade (for George Stephens)	email	Provided shapefile with bald eagle locations associated with the Spokane River Project in Idaho
12/14/2009	To	U.S. Fish and Wildlife Service Washington	Front desk staff	phone	Request to identify individual responsible for bald eagle planning
12/14/2009	To	Washington Department of Fish and Wildlife – Region 1	Howard Ferguson	phone	Discussed best method for commenting
12/15/2009	To	Idaho Department of Fish and Game Nongame Bird Program	Rex Sallabanks	phone	Left message requesting best method for coordination
12/15/2009	To	U.S. Fish and Wildlife Service - Idaho	Rick Donaldson	phone	Discussed best method for coordination
1/13/2010	To	Idaho Department of Fish and Game Nongame Bird Program	Rex Sallabanks	phone	Left message requesting input on draft outline
1/13/2010	To	Washington Department of Fish and Wildlife – Region 1	Howard Ferguson	phone	Left message requesting input on draft outline
1/13/2010	From	Washington Department of Fish and Wildlife – Region 1	Howard Ferguson	email	Requested that draft outline be sent
1/13/2010	To	Washington Department of Fish and Wildlife – Region 1	Howard Ferguson	email	Sent draft outline for comments
1/13/2010	To	U.S. Fish and Wildlife Service - Idaho	Rick Donaldson	phone	Discussed review of draft outline
1/13/2010	To	U.S. Fish and Wildlife Service Washington	Michelle Eames	phone	Discussed availability to comment informally on draft outline. Staff not available. Formal comment will be coordinated by Mark Miller.
1/13/2010	To	U.S. Fish and Wildlife Service - Idaho	Rick Donaldson	email	Provided draft outline for comment
1/19/2010	From	Idaho Department of Fish and Game Conservation Sciences Program	Colleen Moulton (for Rex Sallabanks)	phone / email	Discussed request for review of draft plan outline
1/19/2010	To	Idaho Department of Fish and Game Conservation Sciences Program	Colleen Moulton	email	Provided draft outline

Date	To / From	Agency	Individual	Method	Content
1/19/2010	To	U.S. Fish and Wildlife Service - Idaho	Rick Donaldson	email	Request time to meet and discuss outline
1/19/2010	From	U.S. Fish and Wildlife Service - Idaho	Rick Donaldson	phone	Set up meeting time to discuss draft outline
1/20/2010	To	Washington Department of Fish and Wildlife – Priority Habitats and Species Database	Lori Guggenmos	email / phone	Request update on status of data
1/21/2010	From	Washington Department of Fish and Wildlife – Priority Habitats and Species Database	Lori Guggenmos	email	Update on data request
1/21/2010	From	Washington Department of Fish and Wildlife – Region 1	Howard Ferguson	email	Provided comments on draft outline
1/27/2010	To / From	U.S. Fish and Wildlife Service - Idaho	Rick Donaldson and Kathleen Fulmer	meeting	Meeting to discuss outline and the approach and technical aspects of the proposed plan
1/28/2010	To	Idaho Department of Fish and Game Idaho Fish and Wildlife Information System	Nikki Wade	email	Request shapefile for additional three nests
1/28/2010	From	U.S. Fish and Wildlife Service - Idaho	Rick Donaldson	email	Provided a marked up outline with comments, including input from our meeting
2/1/2010	To	Idaho Department of Fish and Game Conservation Sciences Program	Colleen Moulton	phone	Request data forms used to monitor eagles in Idaho
2/1/2010	From	Idaho Department of Fish and Game Conservation Sciences Program	Colleen Moulton	email	Provided data forms used to monitor eagles in Idaho
2/2/2010	From	Idaho Department of Fish and Game Idaho Fish and Wildlife Information System	Nikki Wade	email	Provided shapefile with three additional nests
2/2/2010	To	Washington Department of Fish and Wildlife – Priority Habitats and Species Database	Lori Guggenmos	phone	Request update on status of data
2/2/2010	From	Idaho Department of Fish and Game Panhandle Region	Mary Terra Berns	email	Requested schedule for commenting based on outline received from headquarters in Boise
2/2/2010	To	Idaho Department of Fish and Game Panhandle Region	Mary Terra Berns	email	Requested comments within the week, with the acknowledgement of a formal comment period on the draft plan in March
2/3/2010	From	Washington Department of Fish and Wildlife – Priority Habitats and Species Database	Lori Guggenmos	email	Update on data request

APPENDIX C

RECORD OF CONSULTATION ON DRAFT PLAN

March 1, 2010

Rick Donaldson
U.S. Fish & Wildlife Service
11103 E. Montgomery Drive, Suite 2
Spokane, Wa 99206

RE: Federal Energy Regulatory Commission's Spokane River Project License
FERC Project No. 2545
Article 414 – Bald Eagle Management Plan

Dear Mr. Donaldson:

On June 18, 2009 the Federal Energy Regulatory Commission (FERC) issued a new License for the Spokane River Hydroelectric Project, FERC Project No. 2545. License Article 414 of the License requires Avista develop a Bald Eagle Management Plan (Plan) within one year of license issuance.

In accordance with the License, Avista is required to consult with the Washington Department of Fish and Wildlife, U.S. Fish and Wildlife Service, and the Idaho Department of Fish and Game as it develops the Plan. As you will see in Appendix B of the Plan, our consultant has already been communicating with staff from your agency as the draft Plan was developed.

With this, and in order to meet the 30 day consultation requirement identified in the License, we request your review and comments on the enclosed Plan by April 2, 2010. After we receive your comments we are required to submit the Plan to FERC for their review and approval. If you have any questions or wish to discuss the Plan, I can be reached at (509) 495-4998.

Sincerely,

Speed Fitzhugh

Elvin "Speed" Fitzhugh
Spokane River License Manager

c: Chip Corsi - IDFG
Doug Robison - WDFW

Enclosure

United States Department of the Interior

FISH AND WILDLIFE SERVICE

Northern Idaho Field Office
11103 East Montgomery Drive
Spokane, Washington 99206

March 24, 2010

Elvin "Speed" Fitzhugh
Spokane River License Manager
Avista Utilities
1411 E. Mission Ave
Spokane, WA 99252

Subject: Spokane River Hydroelectric Project (FERC No. 2545), Bald Eagle Management and Monitoring (FERC Article No. 414), Reference No. 14420-2010-CPA-0010 (File No. 503.0005)

Dear Mr. Fitzhugh:

This letter comprises the U.S. Fish and Wildlife Service's (Service) response to your March 1, 2010, letter and attached Draft Bald Eagle Management Plan (Plan) pertaining to Avista's Spokane River Hydroelectric Project (Project). The Plan dated February 19, 2010, was prepared for Avista by Golder Associates, Inc., to comply with the Federal Energy Regulatory Commission's (FERC) License Article No. 414.

The Service appreciates Avista's willingness to incorporate numerous recommendations that we discussed in regard to the January 6, 2010, initial version of the Plan. These important additions to the Plan include the use of adaptive management concepts and provisions for conducting annual coordination meetings with the Service and other resource managers. We are providing a few additional comments and recommendations for your consideration for use in the preparation of the final Plan.

1. Section 1.4, Monitoring and Planning Areas, *"Planning Area"* (definition), page 4: For clarification and understanding for future users of the Plan, we recommend that the document include a separate Glossary page(s) where key terminology would be defined. Terms such as *"Monitoring area," "Planning area," "Nest active," "Nest abandoned," etc.*, are presently defined in the document, but are found in separate sections. However, other terms such as *"Project lands," "Project operations," "Project*

boundaries," "Project waters," "Project activities," "Survey area," "Nest occupancy and productivity," "key use sites," and *"Primary use area"* are not defined.

2. Section 1.4, Monitoring and Planning Areas, *"Planning Area"* (definition), page 4: For clarification and context, we recommend adding the following sentence to this definition: *"This definition pertains to the geographic area associated with the requirement to prepare and file (with FERC) site-specific management plans for bald eagles."*

3. Section 1.4, Monitoring and Planning Areas, "Planning Area", page 4: The following sentence may need to be edited as shown: *"Three nest sites associated with waters impounded by the Project are known* [to occur on?] ~~from~~ *Avista-owned lands."*

4. Table 1 (pages 5-6) and Figure 1, Bald Eagle Nesting Locations -Idaho: The January 2010, Idaho Fish and Wildlife Information System (IFWIS) spatial data export shows another nest (07101002) in the Swan Lake Area, adjacent to the Coeur d'Alene River. We assume this is an alternate nest for the Swan Lake nesting territory (07102001) shown in Figure 1, and recommend updating Figure 1 based on this new data.

5. Table 2 (page 7) and Figure 2, Bald Eagle Nesting Locations – Washington: Our most recent bald eagle nest data obtained from the Washington Department of Fish and Wildlife is dated October 2008. We are anticipating new data at any time. Therefore, Table and Figure 2 should be updated as soon as this information is available.

6. Table or Flowchart with Response Timeline: For ease of use, we recommend that the Plan include a table or flowchart showing a timeline that indicates the dates when survey activities will occur and when the resultant reports are anticipated to be provided the appropriate resource managers and FERC.

7. Spatial Data Request: In addition to the bald eagle spatial data noted in the Plan (e.g., page 19 under Section 6.2.1; page 20 under Section 6.2.2), we request that Avista provide spatial data for the Project boundary, Planning Area, Project lands and survey routes.

In conclusion, we request that Avista consider the above comments during your preparation of the final Plan. We have also coordinated our review of the Plan with Mark Miller, Assistant Project Leader of the Service's Eastern Washington Field Office, whose geographic area of responsibility covers Avista's Spokane River Projects located in Washington. Mr. Miller agrees with our conclusion that the February 19, 2010, Plan is acceptable and therefore, please consider this letter as the Service's official response in regard to implementing the Plan in both Idaho and Washington.

Thank you for the opportunity to provide our comments and recommendations on the Plan. We look forward to working with your staff during the implementation of the Plan during the course of the new license. If you have any questions, please contact Rick Donaldson of my staff at the Northern Idaho Field Office, at 509-893-8009.

Sincerely,

Assistant Project Leader

cc:

IDFG, CdA (Corsi)
WDFW, Spokane (Robison)

U.S. FISH AND WILDLIFE SERVICE COMMENTS ON DRAFT BALD EAGLE MANAGEMENT PLAN SPOKANE RIVER HYDROELECTRIC PROJECT

Comment: Section 1.4, Monitoring and Planning Areas, "Planning Area" (definition), page 4: For clarification and understanding for future users of the Plan, we recommend that the document include a separate Glossary page(s) where key terminology would be defined. Terms such as "Monitoring area," "Planning area," "Nest active," "Nest abandoned," etc., are presently defined in the document, but are found in separate sections. However, other terms such as "Project lands," "Project operations," "Project boundaries," "Project waters," "Project activities," "Survey area," "Nest occupancy and productivity," "key use sites," and "Primary use area" are not defined.

Response: *We have added a "Glossary" section on pages ii and iii that includes the terms "key use sites", "planning area", "Project activities", "Project operations", "Project boundary", "Project lands", "Project waters", "monitoring area", "nest occupancy", "active, not successful", "not active", "abandoned", "successful", "status unknown", "active, success unknown", "nest productivity", "primary use area", and "survey area".*

Comment: Section 1.4, Monitoring and Planning Areas, "Planning Area" (definition), page 4: For clarification and context, we recommend adding the following sentence to this definition: "This definition pertains to the geographic area associated with the requirement to prepare and file (with FERC) site-specific management plans for bald eagles."

Response: *We have added the suggested sentence to clarify the definition of "Planning Area" in the narrative within Section 1.4 on page 4, and on page iii of the Glossary section.*

Comment: Section 1.4, Monitoring and Planning Areas, "Planning Area", page 4: The following sentence may need to be edited as shown: "Three nest sites associated with waters impounded by the Project are known to occur on Avista-owned lands."

Response: *We made the suggested change on page 4, Section 1.4.*

Comment: Table 1 (pages 5-6) and Figure 1, Bald Eagle Nesting Locations – Idaho: The January 2010, Idaho Fish and Wildlife Information System (IFWIS) spatial data export shows another nest (07101002) in the Swan Lake Area, adjacent to the Coeur d'Alene River. We assume this is an alternate nest for the Swan Lake nesting territory (07102001) shown in Figure 1, and recommend updating Figure 1 based on this new data.

Response: *Nest 07101002 has been added to Table 1 (page 5) and Figure 1.*

Comment: Table 2 (page 7) and Figure 2, Bald Eagle Nesting Locations – Washington: Our most recent bald eagle nest data obtained from the Washington Department of Fish and Wildlife is dated October 2008. We are anticipating new data at any time. Therefore, Table 2 and Figure 2 should be updated as soon as this information is available.

Response: *Requests for spatial data from Washington Department of Fish and Wildlife currently require a six to eight week (or greater) processing period; thus, we are unable to include more recent nest-location information in the plan at this date. All maps will be updated prior to the initiation of surveys and monitoring.*

Comment: Table or Flowchart with Response Timeline: For ease of use, we recommend that the Plan include a table or flowchart showing a timeline that indicates the dates when survey activities will occur and when the resultant reports are anticipated to be provided to the appropriate resource managers and FERC.

Response: *We have added Table 4 "Monitoring and Filing Schedule" to the plan. Because this table is large, it is included immediately following the plan narrative on page 24.*

Comment: Spatial Data Request: In addition to the bald eagle spatial data noted in the Plan (e.g., page 19 under Section 6.2.1; page 20 under Section 6.2.2), we request that Avista provide spatial data for the Project boundary, Planning area, Project lands and survey routes.

Response: *We have added the following sentence to section 6.1 Annual Monitoring Report (page 18) and Section 6.2 Nest Site investigation Report (page 19): "Spatial data provided to the agencies will also include the Project boundary, Project lands, planning area, and survey routes/locations."*

March 1, 2010

Doug Robison
WA Department of Fish & Game
2315 N Discovery Place
Spokane Valley, WA 99216-1566

RE: Federal Energy Regulatory Commission's Spokane River Project License
FERC Project No. 2545
Article 414 – Bald Eagle Management Plan

Dear Mr. Robison:

On June 18, 2009 the Federal Energy Regulatory Commission (FERC) issued a new License for the Spokane River Hydroelectric Project, FERC Project No. 2545. License Article 414 of the License requires Avista develop a Bald Eagle Management Plan (Plan) within one year of license issuance.

In accordance with the License, Avista is required to consult with the Washington Department of Fish and Wildlife, U.S. Fish and Wildlife Service, and the Idaho Department of Fish and Game as it develops the Plan. As you will see in Appendix B of the Plan, our consultant has already been communicating with staff from your agency as the draft Plan was developed.

With this, and in order to meet the 30 day consultation requirement identified in the License, we request your review and comments on the enclosed Plan by April 2, 2010. After we receive your comments we are required to submit the Plan to FERC for their review and approval. If you have any questions or wish to discuss the Plan, I can be reached at (509) 495-4998.

Sincerely,

Speed Fitzhugh

Elvin "Speed" Fitzhugh
Spokane River License Manager

c: Chip Corsi - IDFG
Rick Donaldson- USFWS

Enclosure

Hirschberger, Cherie

From: Fitzhugh, Speed (Elvin)
Sent: Thursday, March 25, 2010 3:49 PM
To: Hirschberger, Cherie
Cc: Nielson, Marilyn
Subject: FW: Bald Eagle Management Plan

From: Robison, Douglas L (DFW) [mailto:Douglas.Robison@dfw.wa.gov]
Sent: Thursday, March 25, 2010 1:21 PM
To: Fitzhugh, Speed (Elvin)
Cc: Rick_Donaldson@fws.gov
Subject: Bald Eagle Management Plan

Speed,

As required under the Spokane River Project License Article 414, Avista has consulted with WDFW on the development of the Draft Bald Eagle Management Plan (dated February 19, 2010). Our staff have provided comments that we feel have been adequately addressed and incorporated into the Plan, therefore, WDFW approves of the Plan.

Regards,

Doug Robison
WDFW
Hydropower Mitigation Coordinator

March 1, 2010

Chip Corsi
Idaho Fish and Game
2750 Kathleen Ave.
Coeur d'Alene, ID 83814

RE: Federal Energy Regulatory Commission's Spokane River Project License
FERC Project No. 2545
Article 414 – Bald Eagle Management Plan

Dear Mr. Corsi:

On June 18, 2009 the Federal Energy Regulatory Commission (FERC) issued a new License for the Spokane River Hydroelectric Project, FERC Project No. 2545. License Article 414 of the License requires Avista develop a Bald Eagle Management Plan (Plan) within one year of license issuance.

In accordance with the License, Avista is required to consult with the Washington Department of Fish and Wildlife, U.S. Fish and Wildlife Service, and the Idaho Department of Fish and Game as it develops the Plan. As you will see in Appendix B of the Plan, our consultant has already been communicating with staff from your agency as the draft Plan was developed.

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Sincerely,

Speed Fitzhugh

Elvin "Speed" Fitzhugh
Spokane River License Manager

c: Rick Donaldson- USFWS
Doug Robison - WDFW

Enclosure

April 6, 2010

March 1, 2010

Chip Corsi
Idaho Fish and Game
2750 Kathleen Ave.
Coeur d'Alene, ID 83814

Duplicate sent to Marg Berns

RE: Federal Energy Regulatory Commission's Spokane River Project License
FERC Project No. 2545
Article 414 – Bald Eagle Management Plan

Dear Mr. Corsi:

On June 18, 2009 the Federal Energy Regulatory Commission (FERC) issued a new License for the Spokane River Hydroelectric Project, FERC Project No. 2545. License Article 414 of the License requires Avista develop a Bald Eagle Management Plan (Plan) within one year of license issuance.

In accordance with the License, Avista is required to consult with the Washington Department of Fish and Wildlife, U.S. Fish and Wildlife Service, and the Idaho Department of Fish and Game as it develops the Plan. As you will see in Appendix B of the Plan, our consultant has already been communicating with staff from your agency as the draft Plan was developed.

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Sincerely,

Speed Fitzhugh

Elvin "Speed" Fitzhugh
Spokane River License Manager

c: Rick Donaldson- USFWS
Doug Robison - WDFW

Enclosure

Hirschberger, Cherie

From: Fitzhugh, Speed (Elvin)
Sent: Friday, April 09, 2010 4:04 PM
To: Hirschberger, Cherie
Subject: FW: eagle plan

Cherie,
I am forwarding you IDFG's comments on the Eagle Management Plan for your records.
Thanks,
Speed

From: Terra Berns,Mary [mailto:mary.terra-berns@idfg.idaho.gov]
Sent: Friday, April 09, 2010 2:52 PM
To: Fitzhugh, Speed (Elvin)
Subject: FW: eagle plan

From: Terra Berns,Mary
Sent: Friday, April 09, 2010 11:46 AM
To: 'speedfitzhugh@avistacorp.com'
Subject: eagle plan

Speed,
I reviewed the draft plan and it looks good. just a couple of thoughts;

- The draft doesn't outline a way to determine if the young actually fledged.
- I think that you need to be clear which IDFG office you are working with – the person you have listed in the plan is Rex Sallabanks, who is in Boise. I don't know if he has ever been up here. I think it is more important to have information exchange to Region 1, here in CdA. We can then forward to Rex.
- We only monitor every five years now.

Otherwise the plan looks thorough.

It appears that the original plan was sent to Boise. In the future if you need something reviewed that pertains to this area, please make sure it is sent to Chip or me.

Let me know if you need anything else.

Mary

Please note new email address **mary.terra-berns@idfg.idaho.gov**

Mary Terra-Berns
Environmental Staff Biologist
Idaho Department of Fish & Game
2885 W. Kathleen Ave.
Coeur d'Alene, ID 83814

Comment: The draft doesn't outline a way to determine if the young actually fledged.

Response: *Section 2.3 (page 9) indicates that observers will make three visits to each nest and will record the number and age of young. The final visit is scheduled from June 15th through July 31st, when young will be either late-stage nestlings or early fledglings. Mortality is generally low at this stage, and the monitoring methods assume productivity based on the number of young counted during this final nest visit. The following sentences have been added to Section 2.3 (page 10) to clarify this approach: "The determination of productivity will be made during the final nest visit. Young observed in flight will be documented; however, at this stage (late-stage nestling to fledgling) mortality is generally low (Jackman and Jenkins 2004) and young noted in the nest during the last visit will be assumed to successfully fledge."*

Comment: I think that you need to be clear which IDFG office you are working with - the person you have listed in the plan is Rex Sallabanks, who is in Boise. I don't know if he has ever been up here. I think it is more important to have information exchange to Region 1, here in CdA. We can then forward to Rex.

Response: *We have changed the contact person listed for IDFG in Section 7.1 (page 20) to Mary Terra-Berns, Environmental Staff Biologist in IDFG's Region 1 office in Coeur d'Alene.*

Comment: We only monitor every five years now.

Response: *We have noted IDFG's monitoring schedule in Section 2.2 (page 8); however, the Plan includes annual occupancy and productivity monitoring consistent with the requirements of Article 414.*