AVISTA CORPORATION

2015

BALD EAGLE MONITORING REPORT

ARTICLE 414

SPOKANE RIVER HYDROELECTRIC PROJECT

FERC PROJECT NO. 2545

Prepared By:

Avista Corporation

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1.0 INTRODUCTION

On June 18, 2009, the Federal Energy Regulatory Commission (FERC) issued a license for Avista Corporation's (Avista) Spokane River Project (Project), FERC Project No. 2545, for a 50-year license term. The Project consists of five hydroelectric developments (HED) located on the Spokane River in northern Idaho (in Kootenai and Benewah Counties) and eastern Washington (in Spokane, Stevens, and Lincoln Counties). The FERC licensed Project boundary generally follows the normal full pool elevation of the impoundment associated with each HED. 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)

Article 414 of the Project License (Project) required the development of a Bald Eagle Management Plan (Plan) which was approved by FERC on May 11, 2011. The Plan included: (i) bald eagle (*Haliaeetus leucocephalus*) nests associated with waters impounded by the Project; (ii) a framework for annual occupancy and productivity monitoring (Monitoring); (iii) annual surveys to identify new nests (Surveys); (iv) investigations to identify bald eagle nesting territories including primary use areas, home ranges, and key use sites (Investigations); and (v) reporting requirements. This Bald Eagle Monitoring Repot (Report) summarizes the 2015 results of the Plan implementation.

The Plan defines the Monitoring Area as the area that encompasses bald eagle nest sites associated with waters impounded by the Project. In general, this area extends one-half mile beyond the Project boundaries. Annual Monitoring, Surveys, and Investigations are completed within this area. Within the Monitoring Area the Plan defines the planning area which is the geographic area associated with the requirement to prepare 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 specific 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.

Avista hired Licia Stragis, Timberland Management Company senior biologist, to assist with implementation of the Plan. This annual monitoring report includes the results for implementation of the Plan. Original and electronic copies of all field forms, photographs, geographic information system (GIS) databases, and reports are on file at Avista.

2.0 OCCUPANCY AND PRODUCTIVITY MONITORING

2.1 Methods

Location of Territories Monitored. Thirty-two nesting territories were monitored in 2015 to determine annual occupancy and productivity. *Figures 1 and 2* show the locations of these nesting territories.

Dates of Monitoring. Monitoring occurred between February 1 and July 31. The methods described below follow those detailed in the Plan. Supplemental efforts included additional observation dates and extending the observation period to midday for watercraft and some land-based monitoring.

Each known nest was observed a minimum of three occasions during the nesting season to determine occupancy and productivity. The first observation was an initial determination of occupancy that occurred between February 1 and April 15; the second observation, an update of nesting status, occurred between April 1 and June 15 and the third observation, a determination of productivity, occurred between June 15 and July 31.

Observations were generally made from first light to midday and required up to one and one half hours to determine the occupancy and productivity. High-resolution optics were used to facilitate observations. Observations were conducted from watercraft, land vehicle, and on foot. Land-based observations took place from a vehicle whenever possible to avoid disturbance to eagles. Nests approached on foot, took place with the observer remaining at least 330 feet from the nest and/or hidden from view and observers retreated if eagles displayed agitated behavior. During each visit, data pertinent to the determination of nest occupancy and productivity were recorded, which included:

- Nest condition
- Nest repair or construction
- Presence and behavior of adults
- Adult incubation or brooding posture
- Number of eggs
- Number and age of young using a standardized aging key based on plumage, size, and posture (Carpenter 1990)

Observers also noted any habitat alterations or activities that have occurred near the nest site that may affect eagle productivity. Based on the results of observations and professional judgment, one of the following occupancy determinations was made for each monitored territory.

1. 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. Nesting determination is the activity status of the nest. “Active” is a transitional designation. A nest that is deemed “Active” at the beginning of the nesting season received a determination of “Successful”, “Active, Not Successful”, or “Active, Success Unknown” at the completion of monitoring.

Active Successful: One or more young fledged from the nest. When the "Successful" determination is used, the Report includes the number of eagles fledged from the nest. According to the Plan, productivity results assume the young noted in the nest during the last observation have successfully fledged. However, the pre-fledging period is considered a very sensitive period. Nestlings at this stage are developing flight abilities, may flush from the nest prematurely, and perish due to disruption (USFWS 2007). Therefore, actual numbers of fledglings and percentages may be the same or lower.

Active, Not Successful: An occupied territory where no young were produced. When the "Active, Not Successful" determination is used, observers tried to determine the cause of reproductive failure where possible, and note the nature, extent, and location of activities or habitat alterations in the territory. This determination includes previous "nest abandoned" designation where eagles had deserted or stopped attending the nests.

Active, Success Unknown: Occupied territory not adequately monitored to determine success. The use of this determination requires an explanation as to why the territory was not adequately monitored to determine success.

2. Not Active: No nesting activity and no adults in a nesting territory. When the "Not Active" determination is used, observers recorded 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 should be included in the annual report. These nests are not included in the analysis of project area productivity, nest productivity, and nest failure rates.

3. Status Unknown: Territory not checked or incompletely checked to determine occupancy. The use of the "Status Unknown" determination requires an explanation of why the territory was not checked or why observations were not adequate to determine occupancy. The annual report includes recommendations to allow for adequate observations during subsequent monitoring.

All territory occupancy, nesting activity status, and productivity data was recorded on standardized data forms. Copies of these forms are included in *Appendix A.*

2.2 Results

Territory Occupancy, Nesting Activity Status, and Productivity Determination

Thirty-two nests were monitored in 2015, 27 were monitored in 2014, 23 nests were monitored in 2013 and 19 nests were monitored in 2012. The 2015 monitoring results are shown in *Table 1* and summarized below.

- Occupancy: 81%: 32 known nesting territories were monitored; 26 nesting territories had active nests and were considered occupied. Six territories did not have not active nests and were considered unoccupied.
- Active nests: 26 nests; 23 with known productivity.
  Active, Successful: 23 nests.
  Active, Success Unknown: 3 nests.

- Not Active nests: 6

- Project area productivity: Thirty-three young were fledged from the 23 active nests with known productivity, (n=23). The average number of fledglings per active Project nest was 1.44.
- Successful nest productivity: All of the 23 active nests with known productivity were successful. Thirty-three young were fledged from the twenty-three successful nests. (n=23). The average number of fledglings per successful nest was 1.44.

Annual productivity of nesting territories in Project waters is summarized in *Table 2.*

Table 1. 2015 Bald Eagle Territory Nest Monitoring Results

Territory Name	Nest Number	Nest in Planning Area	Potential Disturbance Factors	2015 Nest Determination	# of Fledglings 2015	2014	2013	2012
IDAHO								
Ahrs Creek	07I10301	No	Ranch operations, jet boat race	Active, Successful	1	NA	NA	NA
Blessing Slough	07I07601	No	None	Not active	0	2	0	unknown
Cougar Bay	07I03502	No	Residential, osprey nests	Active, Success Unknown	0	2	unknown	0
Eddyville	07I07701	No	Residential	Active, Successful	2	2	2	2
Falls Creek	07I03703	No	Ranch operations, jet boat race	Active, Successful	1	1	0	0
Fernan	07I03401	No	Residential	Active, Successful	1	1	1	NA
Harrison West	08I00001	No	Residential, agriculture, collapsed	Not Active	0	0	NA	NA
Hepton Lake	07I10101	No	Residential, near Hwy 3.	Active, Successful	2	2	2	NA
Heyburn Park	07I05702	No	Park roadways, Trail of CDA.	Active, Successful	2	1	2	0
Killarney Lake	07I01702	No	None	Not Active	0	1	1	2
Mica Bay	07I05401	No	Residential	Active, Successful	2	2	1	2
Post Falls	07I08002	Yes	Residential, roadway, osprey,	Active, Successful	2	1	2	1
Rainy Hill	07I07402	No	None	Active, Successful	1	2	unknown	unknown
Rose Lake	07I01902	No	Residential	Active, Successful	1	0	1	0
St. Maries	07I04301	No	None	Active, Success Unknown	unknown	0	2	1
Swan Lake	07I02002	No	Picnic area recreation on island	Not Active	0	0	unknown	2
Turner Bay	07I06603	No	2014 AD mortality near Hwy.	Not Active	0	0	1	2
Turtle Lake	07I02402	No	Ranch, residence, jet boat race	Active, Successful	1	2*	2	0
Upper Spokane River	07I10201	No	Development opposite side of river	Active, Success Unknown	unknown	0	unknown	NA
Windy Bay	08I00103	No	None	Active, Successful	1	2	unknown	1

Table 1. 2015 Bald Eagle Territory Nest Monitoring Results (continued)

Territory Name	Nest Number	Nest in Planning Area	Potential Disturbance Factors	2015 Nest Determination	# of Fledglings 2015	2014	2013	2012
WASHINGTON								
Charles Maas	06W3055	No	WA Park and residential	Active, Successful	1	1	1	1
Deep Creek	06W10901	No	WA Park and trails	Active, Successful	2	NA	NA	NA
Four Mound	06W10501	No	None	Active, Successful	2	NA	NA	NA
Long Lake South	06W2210	Yes	Residential	Not Active	0	0	0	2
Lower Spokane River	06W10101	No	Osprey, Hwy 291, residential	Active, Successful	1	1	0	NA
Northshore	06W10402	Yes	Ravens, campgrounds	Active, Successful	1	2	NA	NA
Powerball	06W10701	Yes	None	Active, Successful	2	NA	NA	NA
Riverside Launch	06W10601	No	Recreational access	Active, Successful	2	NA	NA	NA
Sportsman	06W10801	No	Residence	Active, Successful	1	NA	NA	NA
Suncrest	06W10301	No	Residential, trails	Active, Successful	1	0	NA	NA
Whalen	06W2973	Yes	Osprey	Active, Successful	1	1	2	3
Willow Bay	06W10201	No	Residential, Willow Bay Resort	Active, Successful	2	1	NA	NA
Total fledglings					**33 (n=23)**	**27* (n=22)**	**20 (n= 16)**	**19 (n=17)**
Fledglings/ nest					**1.44 (n=23)**	**1.23* (n=22)**	**1.25 (n=16)**	**1.12 (n=17)**
Fledglings/ successful nest					**1.44 (n=23)**	**1.50* (n=18)**	**1.54 (n=13)**	**1.73 (n=11)**

NA=monitoring start in year indicated, no previous year information

* Turtle Lake Nest 2014 Report update, one additional fledgling

Table 2. Annual Summary of Project Area Bald Eagle Productivity

	2015	2014	2013	2012
Number of territories checked	32	27	23	19
Number of active territories	26	22	21	19
Percent active (occupancy)	81	81	91	100
Number of nests with known productivity	23	22	16	17
Number of successful nests	23	18	13	11
Number of active nest failures	0	4	3	6
Number success unknown	2	0	5	2
Percent active nest success	100	82	81	65
Percent active nest failure	0	18	19	35
Number of fledglings	33	27	20	19
Fledglings /nest	1.44	1.23	1.25	1.12
Fledglings/ successful nest	1.44	1.50	1.54	1.73

2.3 Discussion

The occupancy and productivity percentages of the nest territories in 2015 are similar to the previous 2012-2014 Project monitoring results, and previous studies conducted by Idaho Fish and Game (IDFG) from 1979 to 2006 in the Idaho Eagle Management Area 7 of north Idaho and Montana (Sallabanks 2006). However, 2015 had the lowest nest failure rate since Project monitoring began in 2012. The number of fledglings per successful nest has been consistent, additionally the number of known nesting territories in the Project area has increased from 19 in 2012 to 32 in 2015.

The following section discusses the factors affecting occupancy and productivity of the individual nesting territories. They are ordered according to the final nesting activity status.

Active, Successful. Twenty-three of 26 active nests were successful. Ten nests successfully fledged two nestlings; thirteen nests successfully fledged one nestling. Most of these nest sites experience some human caused disturbance and habitat alterations from nearby residences, transportation elements, or human recreation as shown in *Table 1*. Only a few of the nests are in isolation from these types of ongoing disturbances. Natural disturbances include osprey (*Pandion haliaetus*) and other raptors with osprey typically considered a natural disturbance.

Active, Success Unknown: There were three territories where adults were present in the territory during the nesting season but nesting success was not confirmed.

The Cougar Bay territory was determined active with one or two adults observed within the vicinity of the nest at each of three monitoring periods during the nesting season. The two identified nest locations did not appear to be used. An alternative nest site was not found. No juveniles or fledglings were observed with the adults or at the known nest locations. Nests remained in good condition. Therefore because of the adult presence, it was assumed there was a nesting attempt, but due to lack of observed young, success was unknown.

The St. Maries territory was determined active with adults observed at the late February and mid-May monitoring dates. An adult was observed incubating at the nest on May 14. However at the July 1 monitoring date there were no adults, nestlings, or fledglings observed. The nests remained in good condition. Therefore adult presence and incubation indicates a nesting attempt, but due to the lack of observed young, success was unknown. Disturbances or habitat alterations that may have contributed to failure were not observed.

The Upper Spokane River territory was determined active with an adult observed at the late April and early July monitoring dates. An adult was observed incubating at the nest on April 23. However at the July 2 monitoring date only one adult was observed. No nestlings or fledglings were observed. The nest remained in good condition. Therefore adult presence and incubation indicates a nesting attempt, but due to the lack of observed young, success was unknown. Disturbances or habitat alterations that may have contributed to failure include river recreation and industrial development across the river.

Not Active. Six nesting territories were not active: Blessing Slough, Harrison West, Killarney Lake, Swan Lake, Turner Bay, and Long Lake South. There were no eagles seen in these nesting territories area during the monitoring period. A summary of their recent territory status, disturbances, or habitat alterations are provided below.

The Blessing Slough territory was inactive in 2015, no disturbances or habitat alterations were observed. It was active, successful in 2014.

The Harrison West territory was inactive in 2015 and in 2014. The nest condition went from "poor" to "collapse" in 2014. No disturbances or habitat alterations were observed.

The Swan Lake territory was inactive in 2015 although a pair of eagles were observed about one mile east on February 27th, 2015. No disturbances or habitat alterations were observed. It was also inactive in 2014.

The Killarney Lake territory was inactive in 2015, no disturbances or habitat alterations were observed. It has been active and successful the three previous years.

The Turner Bay territory was inactive in 2015. No disturbances or habitat alterations were observed. In 2014 it was active, not successful due to an adult mortality in May of 2014, as described in the 2014 Bald Eagle Monitoring Report.

The Long Lake South territory was inactive in 2015. No disturbances or habitat alterations were observed. It was active, not successful in both 2013 and 2014 when completion from other eagles

and ranching operations were regularly observed disturbing the eagles. In 2012 it produced two fledglings.

At the conclusion of the 2015 investigations, a total of 32 territories were determined to be within the Monitoring Area. These nests are planned to be monitored in 2016 and subsequent years in accordance with the Plan. Adjustments to the monitoring area may be made with concurrence of the US Fish and Wildlife Service (USFWS), IDFG and Washington Department of Fish and Wildlife (WDFW) during the annual coordination meeting. Alternate nest locations that have collapsed or been destroyed will remain on the maps for three complete breeding seasons, as the eagles may reoccupy the site, according to USFWS National Bald Eagle Guidelines (USFWS 2007). These alternate nest locations will be retained in the GIS database.

Historic Territories. The Anderson Lake territory with nest 07I03101 was not included in the 2015 monitoring results. The nest collapsed prior to 2012. The territory has not been active or occupied by adult eagles for three years, since monitoring began in 2012. The location of this nest is retained in the GIS database as a historic territory and the area will continue to be surveyed for new nests.

3.0 SURVEYS TO IDENTIFY NEW NESTS

3.1 Methods

The methods described below follow those detailed in the 2010 Plan, with a minor adjustment that extended the survey period through the monitoring period.

Avista coordinates with the USFWS, IDFG, WDFW and other entities to identify potential new bald eagle territories or nests. Supplemental efforts included communications with local and nearby residents of the Project area during the course of ongoing investigations.

Survey Routes. The survey routes by watercraft followed the Project shorelines . Other surveys were conducted by land-based vehicle, watercraft, or on foot to locations where there were new observations of adult eagles. Investigators tracked adult eagles outside of known territories and looked for nests in other likely locations.

Survey Dates. Surveys were conducted on February 25-27 and March 25-26, 2015 and during the ongoing monitoring and territory investigations, which started on February 25, 2015 and ended on July 23, 2015. Documentation for any new nest, or suspected new nest, encountered during the surveys included a minimum of two nest photographs, GPS location, and relevant descriptive information indicating nest location, nest condition, proximity to known nests, and significant habitat alterations. All new nest data was recorded on standardized data forms.

3.2 Results

Two new alternative nests were located during the survey efforts (Table 3). The new Northshore and Post Falls Dam nests were both constructed in 2015 and included in the 2015 monitoring effort. There were no other new nests identified. The new alternate nests are included in the GIS database along with the locations of the previous bald eagle nests (Figures 1 and 2). Documentation of the new alternate nests are included in *Appendix B.*

Table 3. 2015 New Bald Eagle Nests

Territory Name	Number	Latitude, Longitude	Nest in Planning Area	Location/ Relationship to known nests	Notes
NEW NEST, EXISTING TERRITORY					
Northshore, WA	06W1402	47.828126, -117.813264	Yes	600 feet north-northwest of Northshore 06W1401	Active in 2015
Post Falls, ID	07I08002	47.706970, -116.958625	Yes	800 feet west-northwest of Post Falls 07108001	Active in 2015

4.0 NESTING TERRITORY INVESTIGATION

The Investigation is conducted over two consecutive years. The purpose of this Investigation is to identify nesting territories and associated primary use areas, home ranges, and key use sites of all known bald eagle nesting territories within the monitoring area. Nesting territories are only omitted with mutual agreement of USFWS, IDFG, and WDFW as appropriate. New nest territories documented during the course of annual surveys to identify new nests will be added to scheduled Investigations. Site-specific Management plans are completed for nesting territories located in the Planning area and are included in the appendix. Results for nesting territories not located in the Planning area are summarized in the Report.

4.1 Methods

The methods summarized below follow those detailed in the Plan. Professional judgment was used, as appropriate to modify these methods for site-specific circumstances.

Location of Territories. Territory locations were identified by water body; Washington or Idaho county; Section, Township and Range; parcel owners; nearby developments; and land use.

Study Dates and Schedules. Observers collected two nesting seasons of habitat-use data at each of the nests. Observation periods were scheduled once every two weeks for each nest under investigation, from March 1 through July 31. Observation periods occurred from either (i) first light to mid-morning or (ii) two to three hours before sunset to dusk. A combination of morning and evening observation data was collected for each territory under investigation. The observation periods were occasionally extended into early afternoon for investigations conducted with watercraft.

Study Methods. During each observation period, eagle activity was recorded on standardized data forms in a time-interval format referenced to locations marked on a map and/or recorded by GPS. The information documented included: begin and end time, eagle (female, male, or juvenile), location (referenced to map or by GPS), activity, disturbances, and other pertinent information described in the Plan. Observers summarized habitat use by the number of minutes each eagle spent using each habitat feature. Time-interval records that include observations of agitated behavior were summarized by the type of disturbance, frequency, duration, and distance to the source of disturbance.

Observers followed nesting eagles as far as safely and legally possible during the observation period. Observations were conducted from water and/or land, and a variety of vantage points were used. The observation locations were marked on a map or recorded by GPS.

Eagle activities, locations, and habitat features referenced during the investigation were entered into a spatially-linked GIS database after two years of investigations. Habitat use was summarized by the number of minutes each eagle spent using each habitat feature. GIS analysis was used to identify, delineate and quantify the bald eagle nesting territories, home range, primary use areas, and key use sites from the data collected during the field investigations.

Home range, Nesting territory, Primary use areas, Key use sites, and Disturbances. Territory size and shape are affected by topography, available tree structure and prey base. Home range is defined as the geographic area defined by movements and locations of bald eagles. The area may be defined annually, seasonally, daily or any part thereof (Montana Bald Eagle Working Group 1994). Territory observations were conducted from March 1 through July 31 during the nesting and brood rearing periods. Therefore, the home range boundaries were delineated using the extent of eagle movement during this observation period and supplemented with relevant information from other sources. Movement and location during the fall and winter were not investigated and were therefore not included as part the home range in this report.

The nesting territory includes primary use areas and key use sites occupied by eagles during the period of March 1 through July 31. Primary use areas were defined as areas occupied by eagles greater than 75% of the time during investigations. Key use sites include nests, primary perches, and roosting stands. Nesting territory boundaries were delineated by incorporating a 660-foot buffer around the active nest sites and a 300-foot buffer around the primary perches to encompass the flight patterns between these sites.

Disturbances are those activities noted during investigations or from other sources that resulted in disturbance or agitation to nesting eagles and/or reduced the quality or availability of local nesting habitat.

4.2 Results

During 2015 the second year of the Investigations was completed for the Northshore and Suncrest nesting territories, where as the first year of Investigations was completed for the Willow Bay and Mica Bay nesting territories. *Table 4* summarizes the results of the 2014 and 2015 consecutive seasons of nesting territory investigations for the Northshore and Suncrest bald eagle territories and those from previous annual reports.

Table 4. Bald Eagle Nesting Territory Investigation Summary

Territory Name	Territory Number	Planning Area	Distance to Nearest Nest	Location	Study Dates	Home Range Estimate	Nesting Territory Estimate	Disturbance to Eagles or Habitat
Lower Spokane River, WA	06W2209	No	2.1 miles	RM 33.3	2013/ 2014	208 ac.	88 ac.	Osprey, other eagles, human activities.
Post Falls Dam, ID	07I08001	Yes	5.9 miles	RM 102	2013/ 2014	201 ac.	42.5 ac.	Osprey, other eagles, construction
Whalen, WA	06W2973	Yes	1 mile	RM 44.5	2012/ 2013	675 ac.	120 ac.	Osprey, other eagles, anglers.
Long Lake South, WA	06W2209	Yes	2 miles	RM 39.5	2012/ 2013	800 ac.	260 ac.	Other eagles, ranching operations.
Northshore, WA	06W10401	Yes	2 miles	RM 36	2014/ 2015	1247 ac.	103 ac.	Ravens, other eagles.
Suncrest, WA	06W10301	No	2 miles	RM 53	2014/ 2015	434 ac	106 ac	Human activities, GHOW
Willow Bay, WA	06W10201	No	1mile	RM 45.6	2015/ 2016	TBD	TBD	TBD
Mica Bay, ID	07I05401	No	3.5 miles	RM 117.5	2015/ 2016	TBD	TBD	TBD

4.3 Suncrest Nesting Territory Investigation

Location. The Suncrest bald eagle territory is located along Lake Spokane at river mile 52 in Stevens and Spokane County, Washington. Stevens County is located northeast of the Spokane River's center channel; Spokane County is located southwest of the center channel. The territory is located primarily in Section 22, Township 27 north and Range 41 east, but also extends south into Section 27. Parcel owners in the bald eagle territory area include private properties, conservation lands, and Avista-owned lands.

The topography in the territory is generally flat to the southwest, but steeply rises to the northeast to a terrace 300 feet above the river. Habitat in the territory includes the aquatic habitat of the river and nearshore riparian; seral conifer forest adjacent to the shore and along the terrace with residential development. There are two nests located in private conservation lands on the southwest facing slope. Both the West Shore and the Suncrest neighborhood association access areas are located south of the nesting territory. These facilities include lawns, picnic areas, boat docks and launches. Residences are located along West Shore Road and most of the shoreline homes have boat docks. Residences on the northeast portion of the territory are located on the upper terrace. Other land use in the vicinity includes timber harvesting, ranch, and farm operations. Water levels in the Spokane River and are controlled by the Long Lake HED.

Study dates and Schedules. Territory observation periods in 2014 and 2015 were conducted once every two weeks from March 1 through July 31 as detailed in the Plan. A combination of

morning and evening data was collected. A total of 11 territory investigations observation were conducted per year, for a total of 22 territory investigation observation dates in 2014 and 2015.

Study methods. Study methods detailed in the Plan for investigations produced time-interval records about eagle activities, locations, habitat use, and potential disturbances in order to characterize home ranges nesting territory, primary use areas, and key use sites. The data identified disturbances or potential disturbances to nesting eagles. Background research of the territory area, annual monitoring reports, landowner communications, agency communications, and supplemental notes provided information about ongoing activities and those that may or have caused loss or degradation of habitat within a nesting territory.

Results. The results of habitat-use investigations include a brief narrative and map conveying the information about home range estimates, primary use areas, key use sites, and disturbances to nesting eagles or eagle habitat. Home ranges, nest territories, nest sites, perch trees, and night roost stands are not permanent locations and are anticipated to change over time.

Home range estimates. The home range is approximately 434 acres: about 1.56 miles long and up to 0.44 miles wide as shown in *Figure 3.* The home range encompasses both sides of the Spokane River and shorelines.

Nesting territory estimates. The nesting territory is approximately 106 acres; about 1.08 miles long along Lake Spokane and up to 0.19 miles wide as shown in *Figure 3.* Nesting territory boundaries were delineated on the maps incorporating primary use areas. The method to determine the nesting territory used a 300-foot buffer around primary perches to encompass the flight patterns between these sites. A 660-foot buffer is a maximum buffer used at active nest sites following USFWS (2007) guidelines. For the purposes of this report, only the prey capture sites near the primary perches are included in the nesting territory.

The nesting territory is long and narrow including two nest locations on the northeast shore. Habitat in the nesting territory includes Lake Spokane and the associated aquatic area, seral conifer stands of the conservation areas, and the west edge of residential development.

Primary use areas. These areas are defined as occupied by nesting eagles greater than 75% of the time, included the 2014 and 2015 nest sites, seven primary perches, and two night roost stands.

Key use sites (including nest sites, primary perches, prey capture sites, and roost stands)

Nest sites. The 2015 active nest was located in the north portion of the nesting territory in a Ponderosa pine with a bayonet top. It was located in a tree stand identified and active in 2012. The 2014 and 2013 active nest was located in the south portion of the nesting territory in a Ponderosa pine (*Pinus ponderosa*) with an overhead canopy.

Primary perches. The perch locations were typically large diameter, tall trees or snags strategically located for a view of the nest territory or for prey capture. The use of primary perches shifted during the two year investigation to locations near the active nest.

Prey capture sites. Three prey capture locations were identified within the nesting territory. Aquatic areas used for prey capture were primarily along the northeast shoreline. Most prey capture sites were in the pools and backwater areas Lake Spokane. The only prey species observed were fish.

Roost stands. There were two night roost stands that were observed. The north roost stand was used only in 2015 with the corresponding active nest. The south roost stand was used in 2014. Both were located in conifer thickets with northwest aspects. One communal roosting stand used by immatures was identified near the West Shore access area. It is outside of the nesting territory but within the home range.

Disturbances

Typically the eagles were not disturbed by routine use of roads, homes, or other facilities particularly where the uses were present prior to nesting in the area. There have been numerous land use changes in the home range from residential development, which had the potential to result in loss or degradation of habitat. No observable land use changes in the nesting territory have been observed due to its location in the conservation area.

Observed disturbances in 2014, the year the south nest failed, included normal both human activity and great horned owl pair within the nesting territory.

Potential disturbances noted below are listed according to highest frequency. The activities were either observed during investigations to disturb nesting eagles, or to have the potential to disturb the nesting eagles.

Osprey. Ospreys were observed to be the most frequent disturbance of the nesting pair and were first observed in the project area in mid-April. At this point the eagle pair had been through courtship, nest-building, and incubation was underway. Although there were no documented osprey nests in the territory, they were regularly observed hunting the river and flying near the eagle nests. Typically, the observed defense responses were vocalizations. However, in 2015 after the eagle nestling had fledged, a group of fledged osprey disrupted a perching adult eagle, causing eagle vocalizations and flushed the eagle to another perch site.

Competition from other eagles. In 2014 and 2015, other adult eagles were present flying through the nesting territory prior to incubation. Later during the nesting period they were occasionally observed flying overhead along the home range territory margins. The closest occupied nest of another bald eagle pair is the Sportsman nest, which is located downstream and about two miles to the northwest.

Immature eagles were regularly observed flying overhead or lingering at the margins of the adult nesting territory or at communal roosts through the nesting season in 2014 and 2015. Territory defense behavior was primarily vocalizations.

Potential predators or competition. Great horned owls were observed and heard within the nesting territory in both 2014 and 2015. Their impacts were not conclusive.

Human activity. Human activities that were observed to disturb eagles included boaters or anglers that approached perched eagles near the shoreline. These actions often flushed the eagle to another perch site.

The 2014 south nest was near the Suncrest neighborhood access area, as described above. The conservation area has numerous trails, some within 100 feet of the nest, used by joggers and walkers, occasionally with unleashed dogs.

The 2015 north nest location had no neighborhood access area but had similar recreational trails. There were also construction activities along the terrace adjacent to the nesting territory during the nesting season which may have degraded habitat or disturbed eagles.

Avista Project Operations. There were no Avista infrastructure elements located in the Suncrest home range or nesting territory, with the exception of utility lines to the residential areas in the home range.

5.0 REFERENCES

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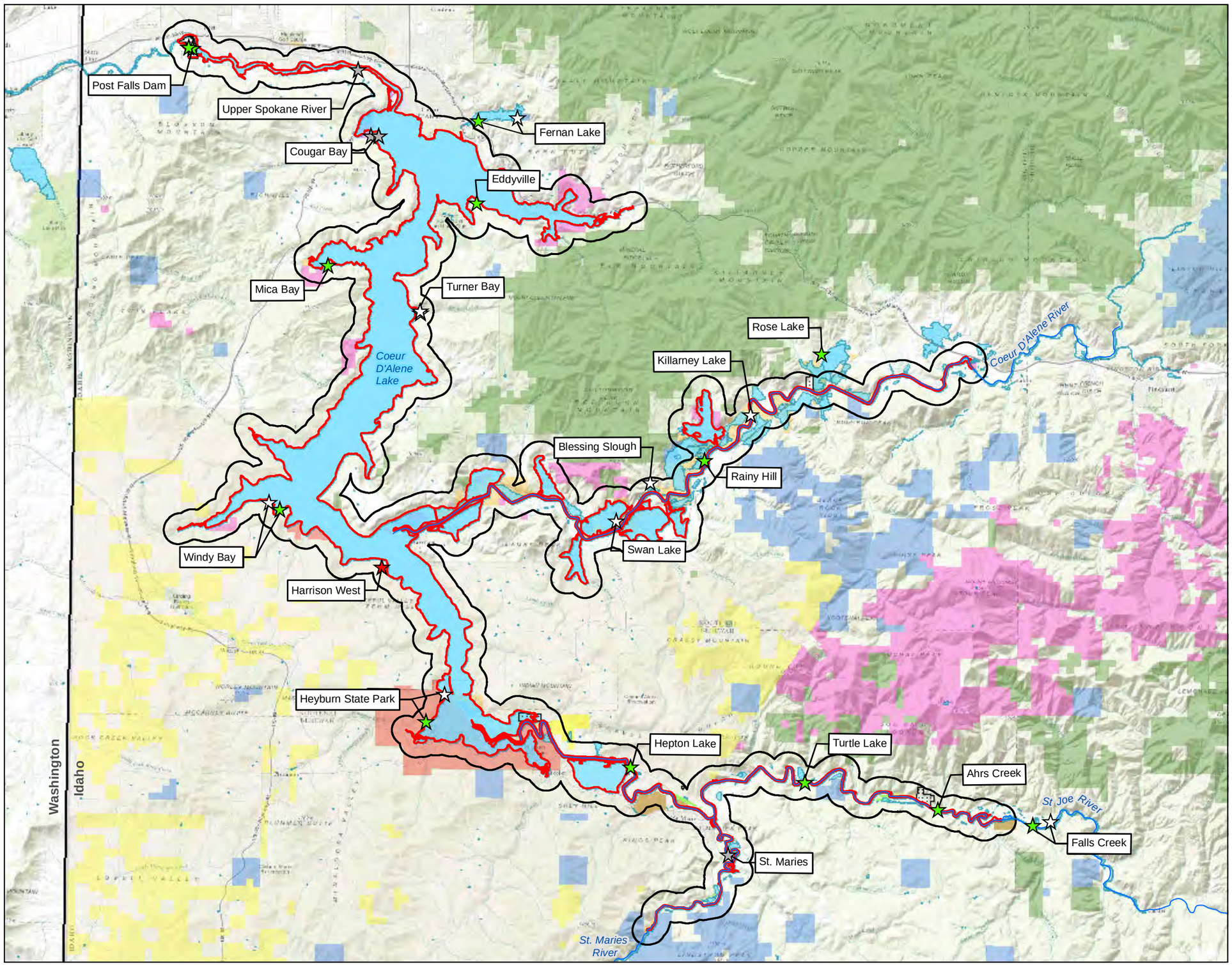
FIGURES



LEGEND

2015 Bald Eagle Nests

- New
- Active, Successful
- Active, Not Successful
- Active, Success Unknown
- Not Active/Alternate
- Collapsed
- Historic
- Post Falls HED Boundary
- Monitoring Area
- Avista-Owned Land/Planning Area

Surface Land Management/Ownership

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

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

N

0 4

Scale in Miles

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

Source:
Avista (HED areas, land ownership),
USDA-NRCS (quadrangle county mosaics),
Bureau of Land Management (surface land management),
WDFW (bald eagle locations),
David Evans and Associates, Inc. (bald eagle locations),
Background Service Layers: ESRI, DeLorme, NAVTEQ, TomTom, Intermap, USGS

FIGURE **1**

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

AVISTA/ECOLOGY 401 CERT/WA

Document Path: H:\Nest Sites, Eagle, other\December2014 data from David Armes\Found maps Bald Eagle Nesting Locations Figures\2015-Idaho_Overview.mxd | 12-30-2015 | David Evans and Associates, Inc.

Whalen
Willow Bay
Powerball
Lower Spokane River
North Shore
Four Mound
Suncrest
Long Lake South
Sportsman
Lake Spokane
Long Lake South
Riverside Launch
Charles-Maas
Nine Mile Reservoir
Deep Creek

LEGEND

2015 Bald Eagle Nests

- New
- Active, Successful
- Active, Not Successful
- Active, Success Unknown
- Not Active/Alternate
- Collapsed
- Historic
- HED Monitoring Area
- Monroe St./Upper Falls HED Boundary
- Nine Mile HED Boundary
- Long Lake HED Boundary

Surface Land Management/Ownership

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

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

N

0 2 4

Scale in Miles

Map Projection:
Washington State Plane
North Zone NAD 1983

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

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.

FIGURE **2**

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

AVISTA/ECOLOGY 401 CERT/WA

0739308101700F11R01_Washington_Overview.mxd | 2/11/2010 | BVANG-JOHNSON

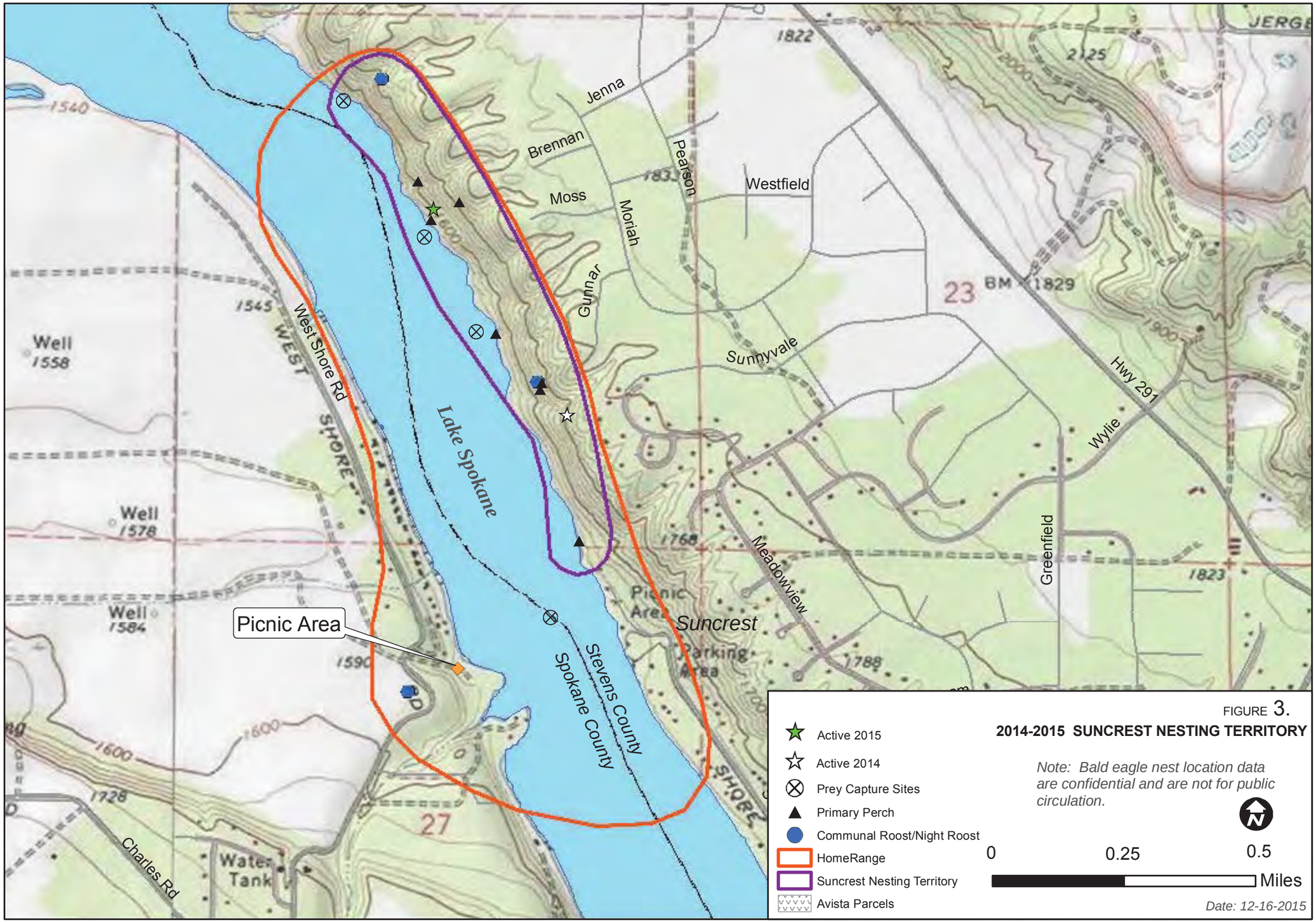


FIGURE 3.

2014-2015 SUNCREST NESTING TERRITORY

APPENDIX A

2015 OCCUPANCY AND MONITORING FORMS

SPOKANE RIVER HYDROELECTRIC PROJECT (FERC Nos. 2545-091 and 12606-000)
BALD EAGLE NEST MONITORING FORM
2015

I. ID

Territory Name: Ahls Creek Territory/Nest Number: 07I10301 Observer Initial: DA Reviewer Initial: LS

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: 1 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)	2/26	Good		PER 2 AD		0	
Update Nesting Status **April 1 – June 15** (late incubation and nestlings)	5/15	Good		Per 1 AD		1	
Determine Productivity **June 15 – July 31** (late nestling and fledging)	7/3	Good				1	

 Territory/Nest Number: Ahrs Creek

IV. SUPPLEMENTAL NESTING INFORMATION (If known)

Date of adult arrival:	prior 2/26	**Date of adult dispersal:**	
Date of egg laying:	prior 5/15	**Clutch size:**	
Date of hatching:	"	**Date/Number of fledglings at dispersal:**	1
Date of fledging:	past 7/3	**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: J. Staggs **Date:** 11/13/2015

Reviewed by: **Date:** 11/30/15

SPOKANE RIVER HYDROELECTRIC PROJECT (FERC Nos. 2545-091 and 12606-000)
BALD EAGLE NEST MONITORING FORM
2015

I. ID

Territory Name: BLESSING SLOUGH Territory/Nest Number: 07I17601 Observer Initial: DA Reviewer Initial: LS

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~~: occupied nest not found

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

Number of Fledglings: 0 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)	2/27	UNK		2 AD downstream, Ø at nest area		—	
Update Nesting Status **April 1 – June 15** (late incubation and nestlings)	5/14	UNK			Ø at nest area		
Determine Productivity **June 15 – July 31** (late nestling and fledging)	7/1	UNK			Ø at nest area		

Territory/Nest Number: Blessing Slough

IV. SUPPLEMENTAL NESTING INFORMATION (If known)

Date of adult arrival:	not near known nests	**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: Territory unoccupied

Reason for abandonment:

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

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

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

Prepared by: L. Staggs **Date:** 11/13/15

Reviewed by: **Date:** 11/30/15

SPOKANE RIVER HYDROELECTRIC PROJECT (FERC Nos. 2545-091 and 12606-000)
BALD EAGLE NEST MONITORING FORM
2015

I. ID

Territory Name: Cougar Bay Territory/Nest Number: 07I07601 Observer Initial: DA Reviewer Initial: LS

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: 0 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)	2/25			2AD	NA	0	
Update Nesting Status **April 1 – June 15** (late incubation and nestlings)	4/23			1AD	NA	0	
Determine Productivity **June 15 – July 31** (late nestling and fledging)							
	7/2			1AD	NA	0	

Territory/Nest Number: Cougar Bay

IV. SUPPLEMENTAL NESTING INFORMATION (If known)

Date of adult arrival:	prior 2/25	Date of adult dispersal:	
Date of egg laying:		Clutch size:	
Date of hatching:	unk	Date/Number of fledglings at dispersal:	
Date of fledging:		Banding data:	

V. NARRATIVE INFORMATION

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

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) unknown

Ongoing Disturbances (record type, extent, and proximity to nest) Residential + osprey nests territorial

Prepared by: A. Straus Date: 11/30/15

Reviewed by: Date: 11/30/15

SPOKANE RIVER HYDROELECTRIC PROJECT (FERC Nos. 2545-091 and 12606-000)
BALD EAGLE NEST MONITORING FORM
2015

I. ID

Territory Name: Eddyville Territory/Nest Number: OTLO 701 Observer Initial: DA Reviewer Initial: LS

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: 2 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	2/25			Ø			
February 1 – March 31							
(pre-egg laying and early incubation)							
Update Nesting Status	4/23			1AD			
April 1 – June 15							
(late incubation and nestlings)							
Determine Productivity							
June 15 – July 31	7/2					2juv	
(late nestling and fledging)							

Territory/Nest Number: Eddyville

IV. SUPPLEMENTAL NESTING INFORMATION (If known)

Date of adult arrival:	prior to 4/23	**Date of adult dispersal:**	
Date of egg laying:		**Clutch size:**	
Date of hatching:		**Date/Number of fledglings at dispersal:**	2
Date of fledging:	post 7/2	**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: L. Straus **Date:** 11/13/15

Reviewed by: **Date:** 11/30/15

SPOKANE RIVER HYDROELECTRIC PROJECT (FERC Nos. 2545-091 and 12606-000)
BALD EAGLE NEST MONITORING FORM
2015

I. ID

Territory Name: Falls Creek Territory/Nest Number: OTC3703 Observer Initial: DA Reviewer Initial: LS

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: 1 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)							
	2/26	Good		1 AD			
Update Nesting Status **April 1 – June 15** (late incubation and nestlings)							
	5/15	Good		1AD		1	
Determine Productivity **June 15 – July 31** (late nestling and fledging)							
	7/3	Good				1	

Territory/Nest Number: Falls Creek

IV. SUPPLEMENTAL NESTING INFORMATION (If known)

Date of adult arrival:	prior 2/26	**Date of adult dispersal:**	
Date of egg laying:	prior 5/15	**Clutch size:**	
Date of hatching:	" "	**Date/Number of fledglings at dispersal:**	1
Date of fledging:	post 7/3	**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: L. Strange **Date:** 11/13/15

Reviewed by: **Date:** 11/30/15

SPOKANE RIVER HYDROELECTRIC PROJECT (FERC Nos. 2545-091 and 12606-000)
BALD EAGLE NEST MONITORING FORM
20 15

I. ID

Territory Name: Fernan Lake Territory/Nest Number: 07I 10340/ Observer Initial: DA Reviewer Initial: LS

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: 1 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)	2/25						
Update Nesting Status							
April 1 – June 15 (late incubation and nestlings)	4/23	good		2AD	inc		
Determine Productivity							
June 15 – July 31 (late nestling and fledging)	7/2	good				1	

Territory/Nest Number: Fernan Lake

IV. SUPPLEMENTAL NESTING INFORMATION (If known)

Date of adult arrival:	prior 4/23	**Date of adult dispersal:**	
Date of egg laying:	" "	**Clutch size:**	
Date of hatching:	post 4/23	**Date/Number of fledglings at dispersal:**	1
Date of fledging:	post 7/2	**Banding data:**	

V. NARRATIVE INFORMATION

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

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: [signature] **Date:** 11/12/15

Reviewed by: [signature] **Date:** 11/30/15

SPOKANE RIVER HYDROELECTRIC PROJECT (FERC Nos. 2545-091 and 12606-000)
BALD EAGLE NEST MONITORING FORM
20 15

I. ID

Territory Name: Hepton Lake Territory/Nest Number: OTI 1011 Observer Initial: DA Reviewer Initial: LS

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: 2 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)							
	2/26/15	Good		1 AD			
Update Nesting Status **April 1 – June 15** (late incubation and nestlings)							
	5/14/15	Good		2 AD		2	
Determine Productivity **June 15 – July 31** (late nestling and fledging)							
	7/1/15	Good		2		2	

Territory/Nest Number: Hepton Lake

IV. SUPPLEMENTAL NESTING INFORMATION (If known)

Date of adult arrival:	prior 2/26	Date of adult dispersal:	
Date of egg laying:	prior 5/14 " "	Clutch size:	
Date of hatching:		Date/Number of fledglings at dispersal:	2
Date of fledging:	post 7/1	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: L. Straglis Date: 11/13/15

Reviewed by: Date: 11/30/15

SPOKANE RIVER HYDROELECTRIC PROJECT (FERC Nos. 2545-091 and 12606-000)
BALD EAGLE NEST MONITORING FORM
2015

I. ID

Territory Name: Hayburn Park Territory/Nest Number: OTI05702 Observer Initial: DA Reviewer Initial: LS

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: 2 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)							
	02/26/15	Good		Ø			
Update Nesting Status **April 1 – June 15** (late incubation and nestlings)							
	05/14/15	Good		1 AD			
Determine Productivity **June 15 – July 31** (late nestling and fledging)							
	7/1/15	Good		1 AD		2	

Territory/Nest Number: Heyburn Park

IV. SUPPLEMENTAL NESTING INFORMATION (If known)

Date of adult arrival:	unk	**Date of adult dispersal:**	
Date of egg laying:	?	**Clutch size:**	
Date of hatching:	prior 7/1	**Date/Number of fledglings at dispersal:**	2
Date of fledging:	post 7/1	**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: J. Triggs **Date:** 11/13/15

Reviewed by: **Date:** 11/30/15

SPOKANE RIVER HYDROELECTRIC PROJECT (FERC Nos. 2545-091 and 12606-000)
BALD EAGLE NEST MONITORING FORM
2015

I. ID

Territory Name: Hoffman West Territory/Nest Number: OSI 00001 Observer Initial: DA Reviewer Initial: LS

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: collapsed

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

Number of Fledglings: 0 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)	2/26	collapse		Ø			
Update Nesting Status							
April 1 – June 15 (late incubation and nestlings)	5/14	"		Ø			
Determine Productivity							
June 15 – July 31 (late nestling and fledging)	7/1	"		Ø			

Territory/Nest Number: Harrison West

IV. SUPPLEMENTAL NESTING INFORMATION (If known)

Date of adult arrival:	none	**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: Territory unoccupied. There were no adults nest collapsed.

Reason for abandonment:

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

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

Ongoing Disturbances (record type, extent, and proximity to nest) residential and agriculture west of nest

Prepared by: L. Straggs **Date:** 11/13/15

Reviewed by: **Date:** 11/30/15

SPOKANE RIVER HYDROELECTRIC PROJECT (FERC Nos. 2545-091 and 12606-000)
BALD EAGLE NEST MONITORING FORM
20 15

I. ID

Territory Name: Killarney Lake Territory/Nest Number: KLE 01702 Observer Initial: DA Reviewer Initial: LS

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: 0 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)							
	03/27/15	good		Ø			
		Ø					
Update Nesting Status **April 1 – June 15** (late incubation and nestlings)							
	5/14/15	good		Ø			
		Ø					
Determine Productivity **June 15 – July 31** (late nestling and fledging)							
	7/1/15	good		Ø			
		Ø					

Territory/Nest Number: Killarney Lake

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: Territory unoccupied, no adults.

Reason for abandonment:

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

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

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

Prepared by: L. Stragis **Date:** 11/13/15

Reviewed by: **Date:** 11/30/15

SPOKANE RIVER HYDROELECTRIC PROJECT (FERC Nos. 2545-091 and 12606-000)
BALD EAGLE NEST MONITORING FORM
20 15

I. ID

Territory Name: Mica Bay Territory/Nest Number: 27I05401 Observer Initial: DA Reviewer Initial: LS

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: 2 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)							
	2/25/15			2 AD			
Update Nesting Status **April 1 – June 15** (late incubation and nestlings)							
	4/23/15			1 AD			
Determine Productivity **June 15 – July 31** (late nestling and fledging)							
	7/6					2	

plus flying young

Territory/Nest Number: Mica Bay

IV. SUPPLEMENTAL NESTING INFORMATION (If known)

Date of adult arrival:	Prior 2/25	**Date of adult dispersal:**	
Date of egg laying:		**Clutch size:**	
Date of hatching:		**Date/Number of fledglings at dispersal:**	2
Date of fledging:	post 7/2	**Banding data:**	

V. NARRATIVE INFORMATION

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

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: A. Strage **Date:** 11/13/15

Reviewed by: **Date:** 11/30/15

SPOKANE RIVER HYDROELECTRIC PROJECT (FERC Nos. 2545-091 and 12606-000)
BALD EAGLE NEST MONITORING FORM
2015

I. ID

Territory Name: Post Falls Territory/Nest Number: OTI 08002 Observer Initial: DA Reviewer Initial: LS

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: 2 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)							
	2/13/15	Good		2 AD			
Update Nesting Status **April 1 – June 15** (late incubation and nestlings)							
	4/23/15	Good		1 AD			
Determine Productivity **June 15 – July 31** (late nestling and fledging)							
	7/5/15	Good		1 AD		1	

Territory/Nest Number: Post Falls Dam

IV. SUPPLEMENTAL NESTING INFORMATION (If known)

Date of adult arrival:	prior 2/13	Date of adult dispersal:	
Date of egg laying:		Clutch size:	
Date of hatching:		Date/Number of fledglings at dispersal:	2
Date of fledging:	past 7/2	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: [signature] Date: 11/13/15

Reviewed by: [signature] Date: 11/30/15

SPOKANE RIVER HYDROELECTRIC PROJECT (FERC Nos. 2545-091 and 12606-000)
BALD EAGLE NEST MONITORING FORM
20 15

I. ID

Territory Name: Rainy Hill Territory/Nest Number: OTI 01402 Observer Initial: DA Reviewer Initial: LS

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: 1 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	2/27/15			Ø			
(pre-egg laying and early incubation)							
Update Nesting Status							
April 1 – June 15	5/14/15	Good		1 AD		1	
(late incubation and nestlings)							
Determine Productivity							
June 15 – July 31	6/30/15	Good				1	
(late nestling and fledging)							

Territory/Nest Number: Rainy Hill

IV. SUPPLEMENTAL NESTING INFORMATION (If known)

Date of adult arrival:	prior 5/14	**Date of adult dispersal:**	
Date of egg laying:	"	**Clutch size:**	
Date of hatching:	"	**Date/Number of fledglings at dispersal:**	1
Date of fledging:	post 6/30	**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: L. Stragis **Date:** 11/13/15

Reviewed by: **Date:** 11/30/15

Page 1 of 2

SPOKANE RIVER HYDROELECTRIC PROJECT (FERC Nos. 2545-091 and 12606-000)
BALD EAGLE NEST MONITORING FORM
20 15

I. ID

Territory Name: Rose Lake Territory/Nest Number: OTI01902 Observer Initial: DA Reviewer Initial: LS

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: 1 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	2/26/15			1 AC			
(pre-egg laying and early incubation)							
Update Nesting Status							
April 1 – June 15	5/15	Good		1 AC		1	
(late incubation and nestlings)							
Determine Productivity							
June 15 – July 31	7/3	Good				1	
(late nestling and fledging)							

Territory/Nest Number: Rose Lake

IV. SUPPLEMENTAL NESTING INFORMATION (If known)

Date of adult arrival:	prior 2/26	**Date of adult dispersal:**	
Date of egg laying:	~ 5/15	**Clutch size:**	
Date of hatching:	"	**Date/Number of fledglings at dispersal:**	1
Date of fledging:	post 7/3	**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: J. Staggs **Date:** 11/13/15

Reviewed by: **Date:** 11/30/15

SPOKANE RIVER HYDROELECTRIC PROJECT (FERC Nos. 2545-091 and 12606-000)
BALD EAGLE NEST MONITORING FORM
2015

I. ID

Territory Name: St Maries Territory/Nest Number: OTI04301 Observer Initial: DA Reviewer Initial: LS

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: 0 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)							
	2/26/15			up to 4 AD upstream Ø at nest sites	—	—	
Update Nesting Status **April 1 – June 15** (late incubation and nestlings)							
	5/14/15			1 AD inc		?	
Determine Productivity **June 15 – July 31** (late nestling and fledging)							
	7/1/15			9		?	

Territory/Nest Number: St Maries

IV. SUPPLEMENTAL NESTING INFORMATION (If known)

Date of adult arrival:	upstream prior 2/26	Date of adult dispersal:	
Date of egg laying:	prior 5/14	Clutch size:	
Date of hatching:	unknown	Date/Number of fledglings at dispersal:	
Date of fledging:	unknown	Banding data:	

V. NARRATIVE INFORMATION

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

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) unknown

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

Prepared by: L. Staggs Date: 11/13/15

Reviewed by: Date: 11/30/15

SPOKANE RIVER HYDROELECTRIC PROJECT (FERC Nos. 2545-091 and 12606-000)
BALD EAGLE NEST MONITORING FORM
2015

I. ID

Territory Name: Swan Lake Territory/Nest Number: 07I02002 Observer Initial: DA Reviewer Initial: LS

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: collapsed

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

Number of Fledglings: 0 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)	2/27/15			∅			
Update Nesting Status							
April 1 – June 15 (late incubation and nestlings)	5/14/15	Collapsed		∅			
Determine Productivity							
June 15 – July 31 (late nestling and fledging)	6/30			∅			

Territory/Nest Number: Swan Lake

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: Territory unoccupied.

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) Recreation on waterways

Prepared by: [signature] Date: 11/13/15

Reviewed by: [signature] Date: 11/30/15

SPOKANE RIVER HYDROELECTRIC PROJECT (FERC Nos. 2545-091 and 12606-000)
BALD EAGLE NEST MONITORING FORM
2015

I. ID

Territory Name: Turner Bay Territory/Nest Number: 27L01402 Observer Initial: DA Reviewer Initial: LS

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: 0 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)	2/25/15			Ø			
Update Nesting Status							
April 1 – June 15 (late incubation and nestlings)	4/23/15			Ø			
Determine Productivity							
June 15 – July 31 (late nestling and fledging)	7/2/15			Ø		Ø	

Territory/Nest Number: Turner Bay

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: Territory unoccupied.

Reason for abandonment:

Disturbing Activities (record type, duration, and proximity to nest) Adult mortality in 2014.

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

Ongoing Disturbances (record type, extent, and proximity to nest) Highway between nest + water.

Prepared by: L. Stragis Date: 11/13/15

Reviewed by: Date: 11/30/15

SPOKANE RIVER HYDROELECTRIC PROJECT (FERC Nos. 2545-091 and 12606-000)
BALD EAGLE NEST MONITORING FORM
20 15

I. ID

Territory Name: Turtle Lake Territory/Nest Number: 07I10202 Observer Initial: DA Reviewer Initial: LS

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: 1 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)							
	2/26/15			1AD			
Update Nesting Status **April 1 – June 15** (late incubation and nestlings)							
	5/15/15	Good		1AD		1	
Determine Productivity **June 15 – July 31** (late nestling and fledging)							
	7/3/15	Good				1	

Territory/Nest Number: Turtle Lake

IV. SUPPLEMENTAL NESTING INFORMATION (If known)

Date of adult arrival:	prior to 2/26	Date of adult dispersal:	
Date of egg laying:	prior to 5/15	Clutch size:	
Date of hatching:	"	Date/Number of fledglings at dispersal:	1
Date of fledging:	post 7/3	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: L. Stragis Date: 11/13/15

Reviewed by: Date: 11/30/15

SPOKANE RIVER HYDROELECTRIC PROJECT (FERC Nos. 2545-091 and 12606-000)
BALD EAGLE NEST MONITORING FORM
2015

I. ID

Territory Name: Upper Spokane River Territory/Nest Number: OTI10201 Observer Initial: DA Reviewer Initial: LS

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: UNK 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)	2/25/15			9			
Update Nesting Status **April 1 – June 15** (late incubation and nestlings)	04/23/15			IAO	INC		
Determine Productivity **June 15 – July 31** (late nestling and fledging)	7/2/15			IAO		?	

*young not observed, but too early, AO present to fledge, no # of young observed = success unknown

Territory/Nest Number: Upper Spokane River

IV. SUPPLEMENTAL NESTING INFORMATION (If known)

Date of adult arrival:	prior 4/23	**Date of adult dispersal:**	
Date of egg laying:	prior 4/23	**Clutch size:**	
Date of hatching:	unk	**Date/Number of fledglings at dispersal:**	/ unk
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) Development across river

Prepared by: L. Stragis **Date:** 11/13/15

Reviewed by: **Date:** 11/30/15

SPOKANE RIVER HYDROELECTRIC PROJECT (FERC Nos. 2545-091 and 12606-000)
BALD EAGLE NEST MONITORING FORM
2015

I. ID

Territory Name: Windy Bay Territory/Nest Number: [illegible] Observer Initial: _____ Reviewer Initial: LS

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: 1 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)	2/26/15			2 AD	PSR		
Update Nesting Status							
April 1 – June 15 (late incubation and nestlings)	5/14/15	Good		2 AD			
Determine Productivity							
June 15 – July 31 (late nestling and fledging)	7/1/15	Good				1	

Territory/Nest Number: Windy Bay

IV. SUPPLEMENTAL NESTING INFORMATION (If known)

Date of adult arrival:	2/26 prior	**Date of adult dispersal:**	
Date of egg laying:	/	**Clutch size:**	
Date of hatching:		**Date/Number of fledglings at dispersal:**	1
Date of fledging:	post 7/1	**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: [signature] **Date:** 11/13/15

Reviewed by: [signature] **Date:** 11/20/15

APPENDIX B

2015 NEW NEST DOCUMENTATION

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

Species: Bald eagle

Territory name (if known): Northshore

Territory/nest number (if known): 06W10402

Reported by: L. Stragis Date: 07/21/2015

Location: T 27 N R 40 E Section: 19 ¼ NE ¼ center

State: WA County: Stevens

Elevation: 1691 ft. Aspect: SW

Lat/Lon: 47.828126, -117.813264* Hydrologic unit: Spokane River

Nest stratum: Tree Nest height (circle ft or m): 90

Position on slope: On terrace just above break to slope Nest condition: Very good

Tree species: Ponderosa pine Tree height (circle ft or m): 110 DBH (circle in or cm): 24

Land ownership: AVISTA

USGS Quad name: Long Lake

Directions to nest: Viewed by boat from Long Lake or walk in from Northshore Day Use area at the south end of Wicker Drive off of Hwy 291.

Comments: Alternative nest is located about 600 feet north- northwest of previous years nest. The nesting tree is not the tallest in the surrounding stand but has the largest diameter.

* Lat/ long from photo interpretation. Not enough satellites for GPS.

Observer Initial: LS Date: 7/26/2015 Reviewer Initial: Date: 8/25/15

Attach locator map and photos showing nest site and nest


Northshore Nests
N2 Alternative nest 2015
47.28126, -117.813264
291
Elaine St Way
Elaine St
Samuel St
James Rd
James St
Loralee St
Northshore N2
Northshore N1
Amy Ln
Adams Dr Way
Hunter Ln
Google earth
© 2015 Google
4000 ft
N

Photo1. View east.

Photo 2. View northwest.

Photo 3. View east.

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

Species: Bald eagle

Territory name (if known): Post Falls

Territory/nest number (if known): 07I08002

Reported by: David Armes Date: 11/12/2015

Location: T 50 N R 5 W Section 3 ¼ SW ¼ NW

State: ID County: Kootenai

Elevation: 2080 feet Aspect: East

Lat/Lon: 47.7069703105788, -116.958624955422 Hydrologic unit: Spokane River

Nest stratum: Tree Nest height (circle ft or m): 190 feet

Position on slope: East of ridge Nest condition: good

Tree species: Ponderosa pine Tree height (circle ft or m): 200 DBH (circle in or cm): 24+

Land ownership: AVISTA

USGS Quad name: Post Falls

Directions to nest: View from Post Falls Bridge or condominium parking area. Access to nest area restricted AVISTA property.

Comments: First observed in 2015 nesting season.

Observer Initial: LS Date: 11 /12/15 Reviewer Initial: DA Date: 11/16/2015

Attach locator map and photos showing nest site and nest


Post Falls Nests
N2 Alternative nest 2015
47.706970, -116.956824
Post Falls N2
Post Falls N1
W 4th Ave
E 5th Ave
E 4th Ave
Railroad Ave
E 3rd Ave
E 2nd Ave
E 1st Ave
Spokane St
Google earth
2000 ft
N

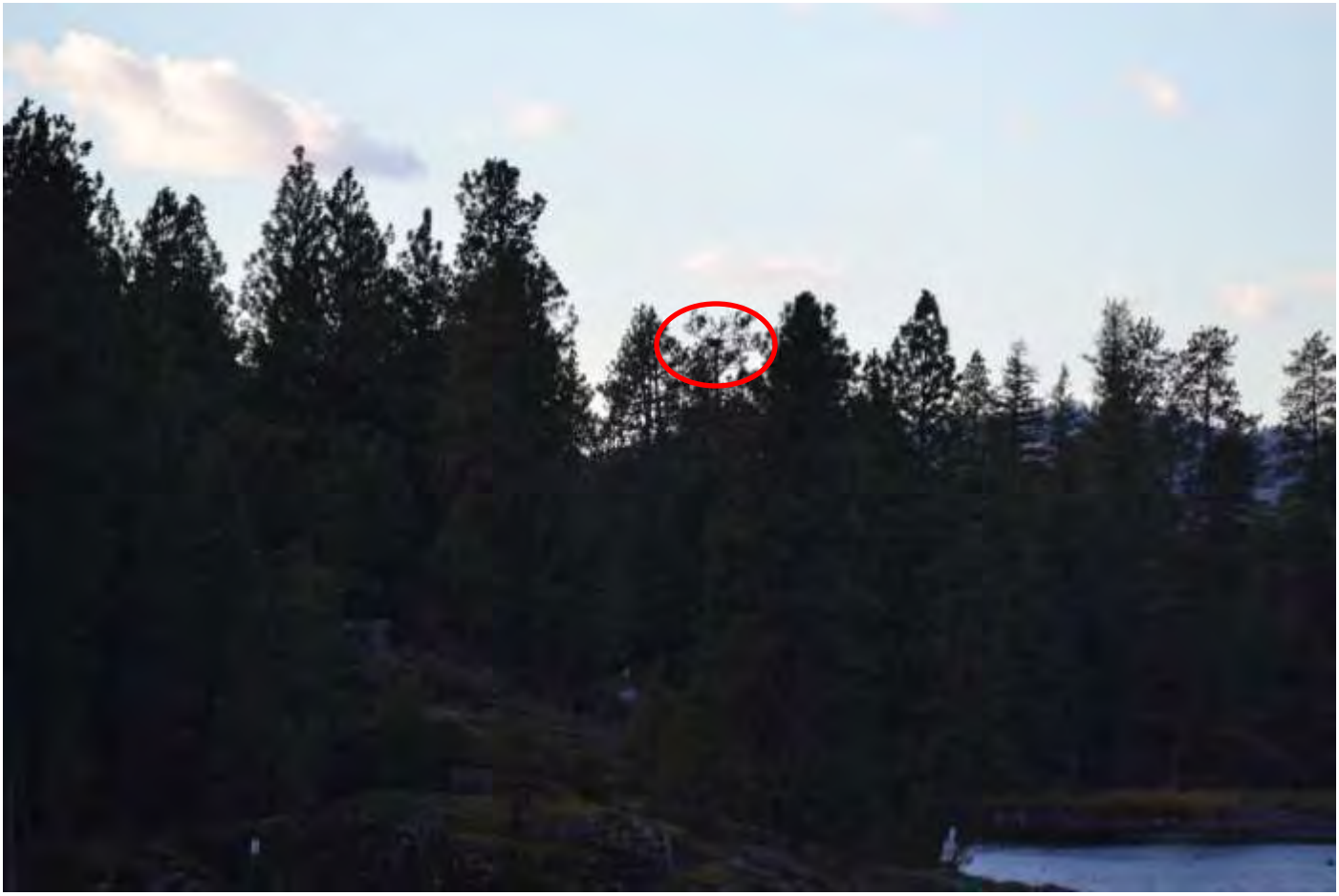


Photo 1. View northwest from Spokane Street Bridge.

Photo 2. View northwest.

APPENDIX C

2015 SITE-SPECIFIC MANAGEMENT PLAN: NORTHSHORE TERRITORY

SITE-SPECIFIC MANAGEMENT PLAN

NORTHSHORE BALD EAGLE TERRITORY

Introduction

Avista's 2010 Bald Eagle Management Plan (Plan) requires the preparation of a Site-specific Management Plan for nesting territories located within the Planning Area. The Plan defines the Planning Area as Avista owned lands where an active or alternate nest associated with Project waters is present, and select additional nesting territories where investigations indicate that (1) Project operations may have negative effects on bald eagle (*Haliaeetus leucocephalus*) productivity or habitats, and (2) opportunities for protection are available. This Site-specific Management Plan contains the results of the habitat-use investigations and identifies nesting territory, home range, primary use areas, and key sites used during nesting, brood rearing, and fledging periods as well as activities that result in potential disturbances to nesting eagles and ongoing activities that result in loss or degradation of habitat within a nesting territory. Additionally, measures are proposed to reduce bald eagle/human conflicts based on identified threats primarily on areas where Avista has some management authority to protect habitat and may have the ability to enforce seasonal restrictions on activities found to disturb nesting eagles. Avista will coordinate with United States Fish and Wildlife Service (USFWS), Idaho Department of Fish and Game (IDFG), and Washington Department of Fish and Wildlife (WDFW), as appropriate to determine whether management plans are already available.

This Site-specific Management Plan may need periodic updating as home ranges, nest territories, nest sites, perch trees, night roost stands are not permanent locations. Therefore, spatial and temporal restrictions in regard to buffer zones for nest sites, perching, foraging, and roosting stands may require updating.

NORTHSHORE NESTING TERRITORY INVESTIGATION REPORT

Location

The Northshore bald eagle territory is located at river mile 36 along Lake Spokane, immediately upstream of the Long Lake Dam. The territory is located primarily in Section 19 of Township 27 North, Range 40 East in Stevens County and Spokane County, Washington. Highway 291 is located north of the territory and Devils Gap Road is located south of the territory. The territory encompasses the Spokane River, north shore, and south shore. The habitat within the territory includes undeveloped seral conifer forest, rangeland, limited riparian habitat, and Spokane River aquatic habitat. Land owners in the territory area include Avista lands with adjacent private residential areas located to the northeast and southwest. There are limited roads, trails, and private access roads. There are a few boat/hike-in recreational campgrounds owned by Avista and administered by Washington State Parks and Recreation. Each campground includes two or three campsites with tables, dock, vault toilet, and an authorized vehicle access road. Other land use in the vicinity includes agricultural development, an electric transmission corridor, and a private airfield to the south. Lake Spokane water levels within the territory are managed by Avista.

Study Dates and Schedules

Territory observations in 2014 and 2015 were conducted once every two weeks from March 1 through July 31 as detailed in the Plan. A combination of morning and evening data was collected. A total of 11 territory investigations observation were conducted per year, for a total of 22 territory investigations.

Study methods

Study methods detailed in the Plan for investigations produced time-interval records about eagle activities, locations, habitat use, and potential disturbances in order to characterize home ranges nesting territory, primary use areas, and key use sites. The data identified disturbances or potential disturbances to nesting eagles. Background research of the territory area, annual monitoring reports, landowner communications, agency communications, and supplemental notes provided information about ongoing activities and those that may or have caused loss or degradation of habitat within a nesting territory.

Home range estimates. The home range extends approximately 1,247 acres: about 2.7 miles long and up to 0.8 mile wide. The home range includes the north shore, Lake Spokane, south shore, and perimeters where eagles were seen soaring or engaged in territory defense. The home range ownership is primarily Avista lands with adjacent private ownership (Figure 1).

Nesting territory estimates. The nesting territory is approximately 103 acres; about 0.7miles long along Lake Spokane and up to about 0.3 miles wide. Nesting territory boundaries were delineated on the maps incorporating primary use areas. The method to determine the nesting territory used a 300-foot buffer around primary perches to encompass the flight patterns between these sites and the two roosts used by the breeding pair. A 660-foot buffer is a maximum buffer used at the two nest sites following USFWS guidelines (Table 1). For the purposes of this management plan, only the prey capture areas associated with the primary perches were included in the nesting territory (Figure 1).

The nesting territory is primarily located on Avista lands on the north shore. Upland habitat is primarily seral conifer stands on the terraces along Lake Spokane. These stands are primarily Ponderosa pine (*Pinus ponderosa*) with Douglas fir (*Pseudotsuga menziesii*). Aquatic areas used for prey capture in the nesting territory were typically located within 100 feet from the shore, in small bays and nearshore areas close to the nests and primary perches. Prey species observed were aquatic fish species with carp carapaces found under the nest and under the perches near prey capture sites. Upland prey captures were not observed.

Primary use areas. These areas are defined as those occupied by nesting eagles greater than 75% of the time. These included two nest sites, six primary perches, and two roost stands.

Key use sites (including nest sites, primary perches, and roost stands)

Nest sites. The active nest in 2015 is a new nest, located about 550 feet northwest of the 2014 nest. It is located in a ponderosa pine with an overhead canopy. Although the nest tree is not in the tallest tree of the stand, it has the largest diameter. The nest site is situated at the terrace break about 450 feet from Lake Spokane overlooking the nesting territory. This nest was successful in 2015. The alternate nest was successful in 2014. The two nest sites are located between two established campgrounds on the north shore. Historically there were nests across the river.

Primary perches. There were six primary perches identified in the territory. Perch locations for territory defense were typically tall trees and snags situated to give a view of the Lake Spokane and the nest. They appeared to be strategically located to view approaches to the nesting territory as well as the nest. Perch locations near prey capture sites were located along the shoreline.

Roost stands. The nesting territory acreage includes two roost stands near the nest locations that were regularly used by the breeding adults. Another roost stand was located nearly one mile east of the nests, at the east extent of the home range. It was sometimes used by one or more of the breeding pair and immature eagles as a communal roost and as a night roost during and after the 2014 and 2015 nesting seasons. Because of the distance from the nests and primary perches, this roost stand was not included as a key use site of the nesting territory.

Disturbances

Typically the eagles were not disturbed by routine use of roads, homes, or other facilities present prior to nesting. The Northshore breeding pair appeared acclimated to existing human activities and habitat conditions. Productivity has not been negatively impacted by disturbances during investigations. Two young fledged in 2014; one young fledged in 2015.

Potential disturbances noted below were observed during investigations either to disturb nesting eagles or to have the potential to disturb the nesting eagles. The activities were listed according to level of disturbance.

Ravens. In 2014 during early incubation period, ravens in groups of two to three were observed disturbing the nesting pair. A group of ravens were vocalizing from the north and then flew as close as 10 feet from the incubating female causing the female and nearby male to vocalize and soon the female left the nest and both eagles tried to drive them off. The acrobatic ravens split up into tight flight paths and revolved within 200 feet of the nest. After 11 minutes the eagles were visibly slowing down, but chased the ravens to the north. The male and female eagle returned to the nest tree to perch and incubate respectively. In 2015 when the eagle nestling was first observed, two ravens flew above the nest with a perched adult eagle for five minutes, but there was no defense behavior observed. In late May, when the nestling was perched on the edge of the nest with the adult female, a group of 15 ravens flew above the nest, but there was no eagle defense behavior observed. Ravens were observed and heard regularly north of the nest, there may be raven nests or roosts in that area. Interaction between these eagles and ravens are assumed to occur regularly.

Competition from other eagles. Other adult eagles were observed sporadically during the nesting season as flybys above and through the nesting territory. Vocalizations were the only territory defense behavior of the nesting pair. Immature eagles were regularly observed within the home range and in the nesting territory, across the river, or flying high above the nesting territory, although often out of sight of the nest. Territory defense behavior by the nesting pair included vocalizations and occasionally driving the immatures out of the nesting territory. But the eagles were also observed flying together at the far extent of the home range. The community/night roost stand at the eastern extent was used by the other adult eagles and immatures.

Osprey and other raptors. Osprey were regularly seen flying or hunting along and above Lake Spokane but there were no documented disturbances to the nesting pair. The ospreys were first observed in the second week of April. At this point, the eagles had been incubating for at least one month. There were four osprey nests documented within the Northshore home range all on

the south terrace of Lake Spokane. Osprey presence in the area was normal and unlikely to be related to human–caused activities, except three of the nests are located on transmission line towers. The eagles appeared to benefit by the osprey presence in this territory. On two separate instances, the female eagle was observed perched below the flight line of the osprey to their nests on the terrace. When the osprey were transporting a fish to the nest, the eagle flew up from below, pursuing the osprey to an altitude that the osprey dropped the prey and the eagle caught it mid-air. This maneuver enabled a fish capture without the expended effort of a water capture or in-water retrieval.

Other raptors observed include red-tailed hawks and barred owl (calls), but disturbances to the eagles by these raptors were not observed.

Avista project construction and operations. Avista's Long Lake HED facilities are not located within the territory home range and no HED operational activities took place during the territory investigations except seasonal water level changes. There were no ongoing activities observed that resulted in loss or degradation of habitat within the nesting territory.

Prior to the 2013 and the 2014 territory investigations, forest stand improvement thinning was conducted on Avista lands in parts of the home range and the nesting territory. These operations were conducted prior to the nesting season and outside of the established nest buffer and primary perches were avoided. In 2014, Avista developed ten boat-in-only campgrounds in the home range prior to the nesting season, one within the nesting territory and one west of the nesting territory. Construction was outside of the nest buffers and avoided primary perches. The buffers and temporal restrictions utilized by Avista were effective in avoiding and minimizing impacts to the eagles, nesting territory, and productivity.

Human activity. Human activity was not observed to disturb the Northshore nesting pair. Human recreation activities observed during investigations in the home range and nesting territory without apparent disturbance include campers and boaters at or near the campsites, where the closest proximity to a nest was 780 feet. There were no observations of humans approaching the nests or nest territory. Land based-motorized vehicle access to the home range generally negligible due to restricted access and nest territory had no access roads for motorized vehicles. The private airfield south of the home range had small planes departing and arriving during most observation dates. Wildland fires occurred in both 2014 and 2015, north of the home range during the investigations. The fires and smoke, visible from the south shore, did not appear to impact eagle activities. Fire related aircraft retrieving water from Lake Spokane within the home range were watched by the eagles but they did not flush from their perch locations or appear to be disturbed.

NORTHSHORE MANAGEMENT PLAN

The primary objective of the site-specific management plan is to 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.

Avoidance and Protection Measures

To meet the objectives of the Plan, measures may be proposed to avoid or reduce bald eagle/human conflicts based on identified threats. This site-specific management plan 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.

There are no proposed measures to reduce bald eagle /human conflicts at this time. The existing level of human activities, including recreational activity and Avista operations, have not had a deleterious effect on the eagles. Avista does not have management authority on adjacent private lands where activities may disturb nesting eagles.

The following guidance is specifically for new or a new change in activities or development such as: timber and forestry operations, vertical infrastructure, linear infrastructure such as roads, trails, canals, power lines, other utilities (USFWS 2007), or recreation facilities. To avoid disturbing nesting bald eagles, the USFWS recommends: (1) maintaining natural forested (or vegetative) buffers around nest trees to minimize visual and auditory impacts associated with human activities; and (2) avoiding certain activities during the nesting season, which extends from January 1 through August 15 in the Pacific Northwest (USFWS 2007). These recommendations are applicable only to those key sites and activities where Avista has management authority.

Table 1. Recommended Spatial and Temporal Restrictions to Protect Bald Eagles' Key Sites from New Disturbances

Bald Eagle Use	Buffer Zone Size	Temporal Restriction	Other Restrictions
Nest sites	330 feet (660 feet if action is visible from the nest.)	January 1 through August 15	Year round-avoid permanent development, pesticides, clear cutting, or removal of over story within 330 feet of nest
Primary perches	case-by-case*	January 1 through August 15	Retain snags. Avoid or minimize impacts
Prey capture sites	case-by-case*	January 1 through August 15	Avoid or minimize impacts
Roost stands	case-by-case*	January 1 through August 15	Avoid or minimize impacts

* Primary perches, prey capture sites, and roost stands do not have a defined buffer by USFWS. However to minimize potentially disruption in the eagles nesting territory, the above buffers are proposed.

Additional Guidelines and Management Practices

The following list is a compilation of guidelines and management practices from various projects and agencies that may be applicable to the Northshore territory:

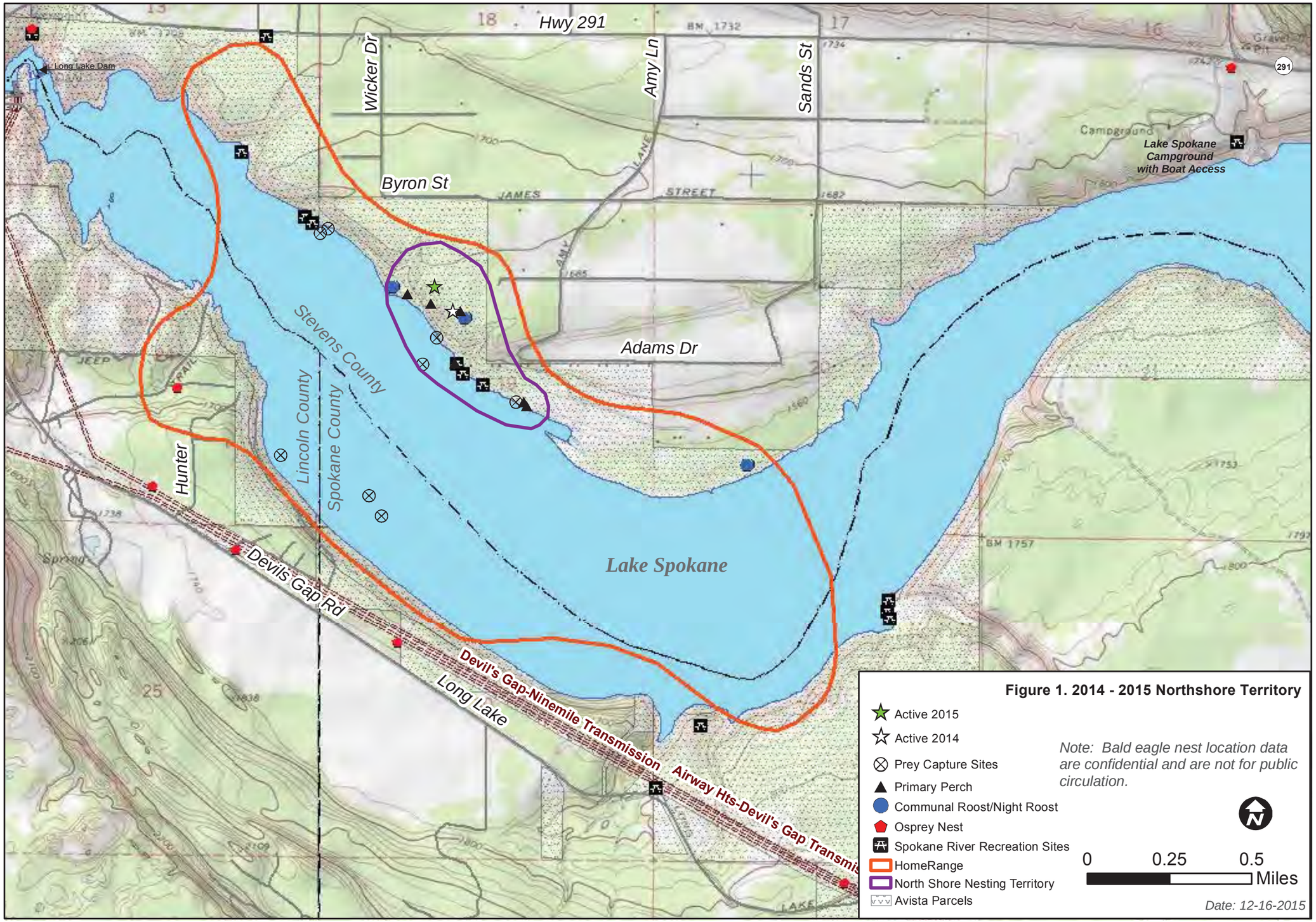
1. Maintain forested habitat in home range to provide secure habitat for eagles.
2. Retain mature trees and old growth stands, particularly within one-quarter mile from water as applicable to Avista-owned lands, to allow for recruitment of snags and other perch trees.
3. Habitat enhancement, i.e. restoration, thinning, burning, or other activities may be conducted outside of breeding season.

4. Avoid blasting and other activities that produce extremely loud noises within one half mile of active nests during breeding season, unless greater tolerance to the activity (or similar activity) has been demonstrated by the eagles in the nesting area.
5. Monitor nest alternate sites for up to three years.
6. Verify nest sites, key sites and regulatory buffers prior to permanent or intense development activities in order to avoid deleterious effects to nesting pairs.
7. Continue conscientious use of pesticides, herbicides, fertilizers, and other chemicals only in accordance with federal and state laws to avoid impacts to eagles directly or indirectly thru prey species.

References

US Fish and Wildlife Service (USFWS) 2007. National Bald Eagle Management Guidelines. U.S. Fish and Wildlife Service. May 2007. http://www.fws.gov/migratorybirds/CurrentBirdIssues/Management/BaldEagle/NationalBaldEagleManagementGuidelines.pdf. Retrieved September 10, 2015.

FIGURE 1. NORTHSHORE BALD EAGLE TERRITORY


Hwy 291
Wicker Dr
Amy Ln
Sands St
Long Lake Dam
Byron St
JAMES
STREET
LANE
AMY
Campground
Lake Spokane
Campground
with Boat Access
Adams Dr
Stevens County
Lincoln County
Spokane County
Lake Spokane
Hunter
Devils Gap Rd
Long Lake
Devil's Gap-Ninemile Transmission
Airway Hts-Devil's Gap Transmis
Figure 1. 2014 - 2015 Northshore Territory
Active 2015
Active 2014
Prey Capture Sites
Primary Perch
Communal Roost/Night Roost
Osprey Nest
Spokane River Recreation Sites
HomeRange
North Shore Nesting Territory
Avista Parcels
Note: Bald eagle nest location data are confidential and are not for public circulation.
0
0.25
0.5
Miles
Date: 12-16-2015