

**Youngs Creek Hydroelectric Project  
FERC No. 10359**



**WILDLIFE HABITAT MITIGATION PLAN**  
License Article 403

**2019 ANNUAL REPORT**

Prepared By:



Everett, WA

December 2019

**Final** – This document has been prepared for the District. It has been peer-reviewed by the District for accuracy and formatting based on information known at the time of its preparation and with that understanding is considered complete by the District. The document may be cited as:

Public Utility District No. 1 of Snohomish County (District). 2019. Wildlife Habitat Mitigation Plan (License Article 403) Annual Report for the Youngs Creek Hydroelectric Project (FERC No. 10359). December 2019.

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## LIST OF ACRONYMS AND ABBREVIATIONS

CAPA	Critical Area Protection Area
FERC	Federal Energy Regulatory Commission
Project	Youngs Creek Hydroelectric Project, FERC No. 10359
ROW	right-of-way
USFWS	U.S. Fish and Wildlife Service
WDFW	Washington Department of Fish and Wildlife
WHMP	Wildlife Habitat Mitigation Plan

## 1. INTRODUCTION

A license was issued by the Federal Energy Regulatory Commission (FERC) on May 5, 1992 for the Youngs Creek Hydroelectric Project (Project) located south of Sultan, Washington. As part of the Order Issuing License, Article 403 directed that a final wildlife habitat mitigation plan be prepared. In 2011, Public Utility District No. 1 of Snohomish County (the District), current owner and operator of the Project, filed for an amendment to the 1992 Wildlife Habitat Mitigation Plan (WHMP). The amendment was approved by the FERC on September 8, 2011.<sup>1</sup>

The WHMP identifies the elements of habitat protection, revegetation, and enhancement of Project lands and addresses ongoing monitoring and reporting. The District is to provide a written report to the FERC every five years,<sup>2</sup> and a written summary report to the Washington Department of Fish and Wildlife (WDFW) and the U.S. Fish and Wildlife Service (USFWS) annually. WDFW and USFWS were provided a copy of the draft report on November 22, 2019, for a 30-day review and comment period (Appendix B). This WHMP Annual Report details activities that were conducted from December 2018 through November 2019.

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<sup>1</sup> (136 FERC ¶ 62,206).

<sup>2</sup> The next 5-year report will be filed with FERC by December 31, 2022.

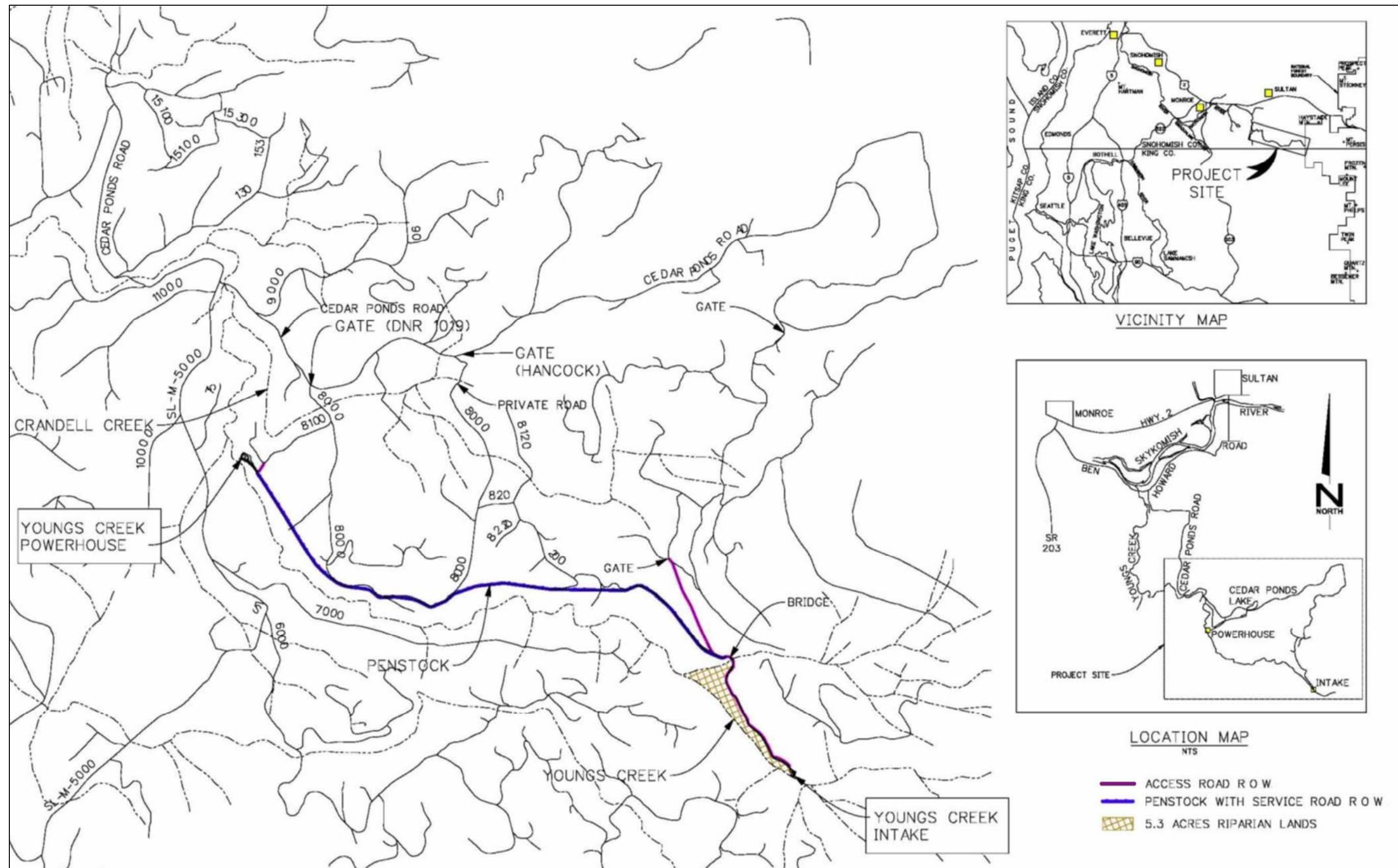


Figure 1. Map identifying penstock and access road right-of-ways.

## **2. VEGETATION MANAGEMENT AND MONITORING**

As specified in the WHMP Section 3.0 (g) and (h), all mitigation areas were monitored during 2019 to ensure the objectives of the WHMP are being met. Monitoring of Project lands consisted of periodic checks on vegetative conditions and documentation or treatment of occurrences of noxious or invasive species. Revegetated and reseeded areas will continue to be monitored annually for the duration of the License. Coverage of shrubs and grasses will also be visually evaluated on an annual basis. If surveys indicate that coverage by bare ground is estimated to be more than 20 percent, reseeded areas will occur with the appropriate erosion control seed mix, as noted in the WHMP. Noxious weeds will be controlled during the growing season, as necessary. Monitoring of riparian and upland forest mitigation areas will consist of periodic checks of overstory vegetation.

### **2.1. Penstock Right of Way Revegetation**

Following completion of Project construction activities, the penstock right-of-way (ROW) (Figure 1) was seeded in the fall of 2011 and reseeded, where necessary, in the spring of 2012. Vegetation continues to meet coverage requirements and no construction activities occurred during 2019 that precipitated the need to re-seed any portion of the ROW.

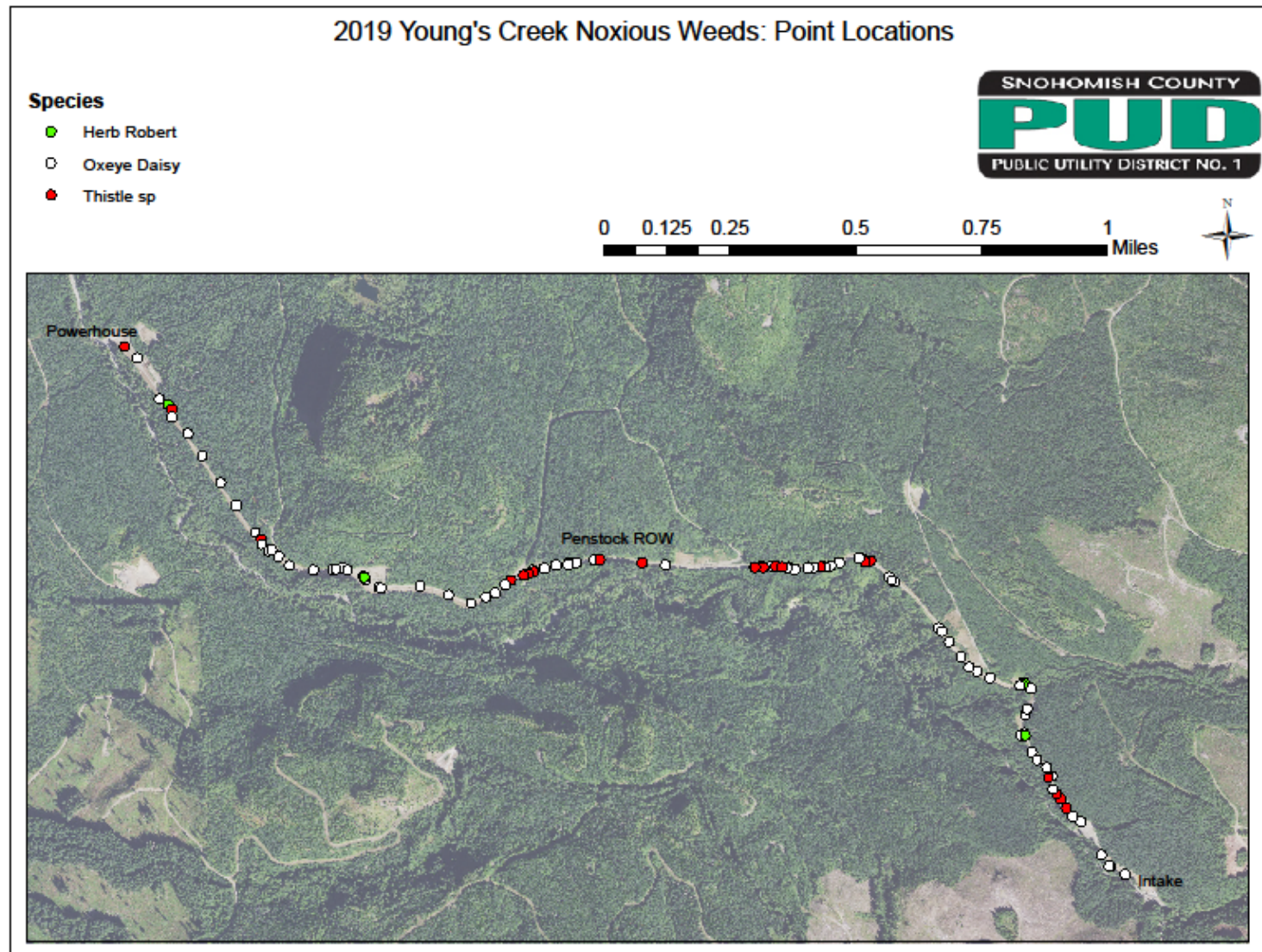
#### **2.1.1 Line of Sight Reduction/Establishment of Hiding Cover**

Growth of native vegetation will continue to be allowed along the penstock ROW to the extent practical without impeding visual monitoring of pipeline integrity. Trees will be allowed to grow in the outer 10 feet on either side of the ROW. To date, native shrubs have begun to re-establish in only a few locations along the ROW margins. During 2019, two piles of large woody debris were placed along the upper reach of the ROW to create hiding cover and break up the line-of-sight (Figure 4). The wood was procured during summer 2019 from Campbell Global following a logging operation on their property near the project intake.

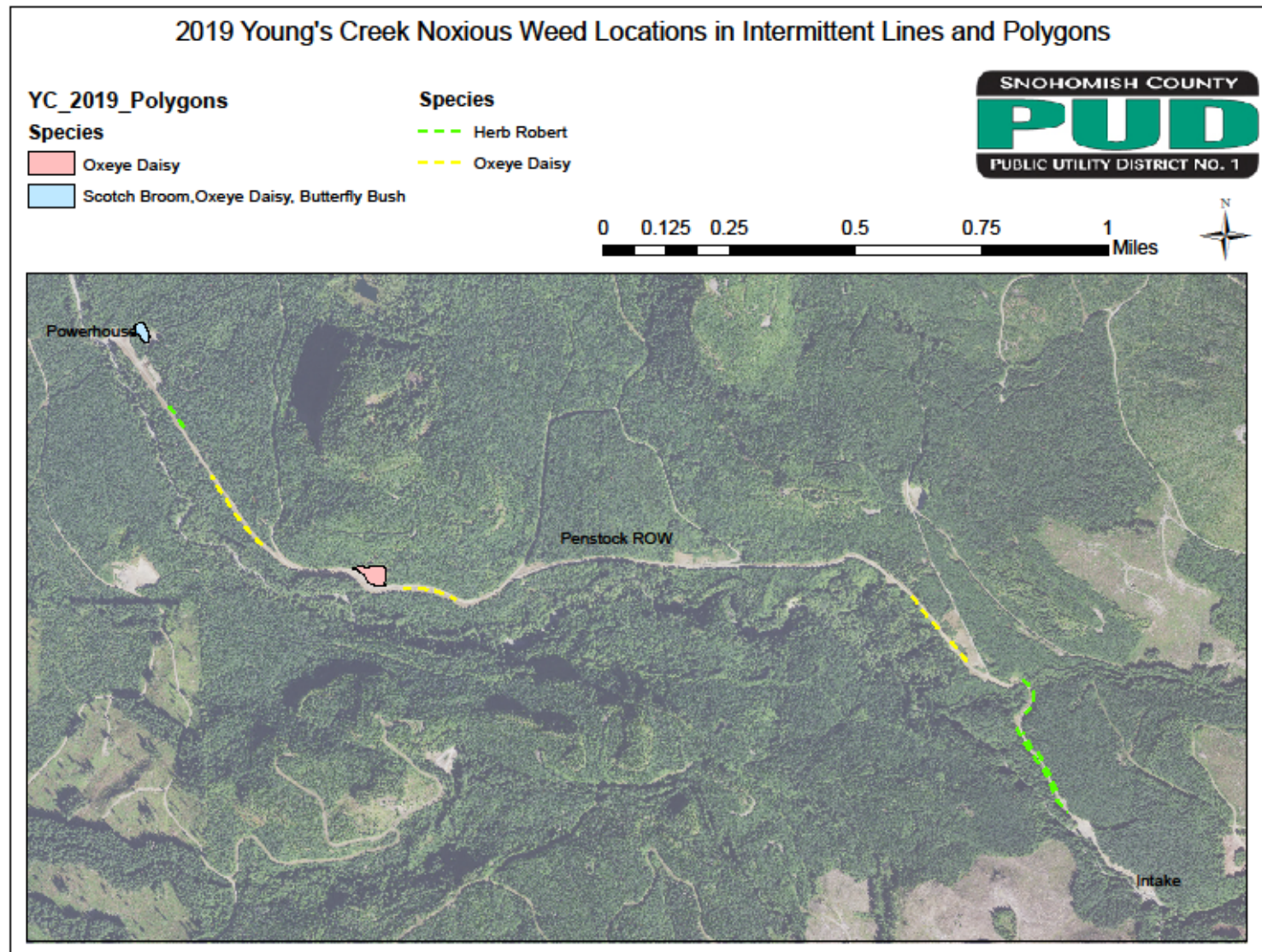
#### **2.1.2 Noxious Weed Management**

Pursuant to WHMP Section 3.0(a), a Noxious Weed Management Plan was developed for the Project in 2013. Accordingly, noxious and invasive weed control was performed over nine days during the 2019 growing season to comply with applicable noxious weed regulations. The primary weeds controlled were Bull and Canada thistle, Oxeye Daisy, Scotch broom, and Butterfly bush. Methods of control consisted of manual removal of Scotch broom and Butterfly bush, and use of a non-selective, post-emergent Organic Materials Review Institute (ORMI) listed herbicide for all other weeds.

Monitoring of weed populations on Project lands was conducted by District biologists with locations of weed infestations noted and treatment measures implemented. Spatial information was partitioned into three forms of symbology: points (discrete locations along the ROW and spur roads), intermittent lines (weeds commonly intermixed with native ROW vegetation), and polygons (weeds intermixed with native vegetation confined to specific areas beyond the ROW boundary) (Figures 2 and 3). Road and penstock ROWs were patrolled multiple times during the growing season to identify areas where weed control was required.



**Figure 2. Map identifying discrete noxious weed locations.**



**Figure 3. Map identifying noxious weed infestations in intermittent lines and polygons.**

## **2.2 Access Road ROW Revegetation**

The rights-of-way along the Project access roads (Figure 1) have been revegetated with the grass/forb mix noted in the WHMP. The former laydown areas were planted with Douglas-fir seedlings in 2011. During a 2018 field visit, WDFW requested metrics describing Douglas-fir trees planted adjacent to the powerhouse and ROW. In 2019, the District measured 55 trees in 0.27 acres. The average height of the trees was estimated at 14 feet. Alders are also filling in this area creating a mixed stand of young trees.

## **3. GATES**

As required under WHMP Section 3.0(c), gates restricting access to the powerhouse and intake areas have been installed (Figure 1). Access is provided to District personnel and contractors for activities tied to normal Project maintenance. Access is also provided to adjacent landowners for professional silvicultural and forest management activities.

## **4. AVIAN NESTING AND PERCHING HABITAT**

### **4.1. Nest Boxes**

Prior to and following the nesting season, nest boxes were maintained by removing any debris and/or old nesting material from within the cavity of the boxes. Since the female gathers nesting materials in preparation for egg-laying, boxes are not provided with any supplemental nesting materials in advance of the nesting season. Nests were checked by the District biologist as required by the WHMP schedule (Appendix A). Tree swallows nested in four of the pole-mounted nest boxes and began nest construction in two additional boxes. One box has received use seven years in a row and seven boxes have been used two or more years overall (Figure 4). To avoid excessive disturbance, eggs and chicks discovered in the nests were not moved during the counting process; as a result, numbers of eggs or fledglings are only estimates. In 2019, nest box surveys yielded a fledgling estimate of 14 tree swallows from 4 boxes. Monitoring associated with other nest box programs suggests that the installation of additional boxes should not be considered until a threshold of 50 to 80 percent successful usage is attained (Bellrose & Holm, 1994). No additional box installations are planned at this point.

In 2018, three owl boxes were placed in the 5.3-acre forested mitigation parcel. Target species were Northern saw-whet (*Aegolius acadicus*) and western screech (*Megascops kennicottii*) owls. Each box was placed between 10 and 15 feet above the ground on dominant trees within the densest areas of the forest. In 2019, the owl boxes had no observed use (Appendix A).

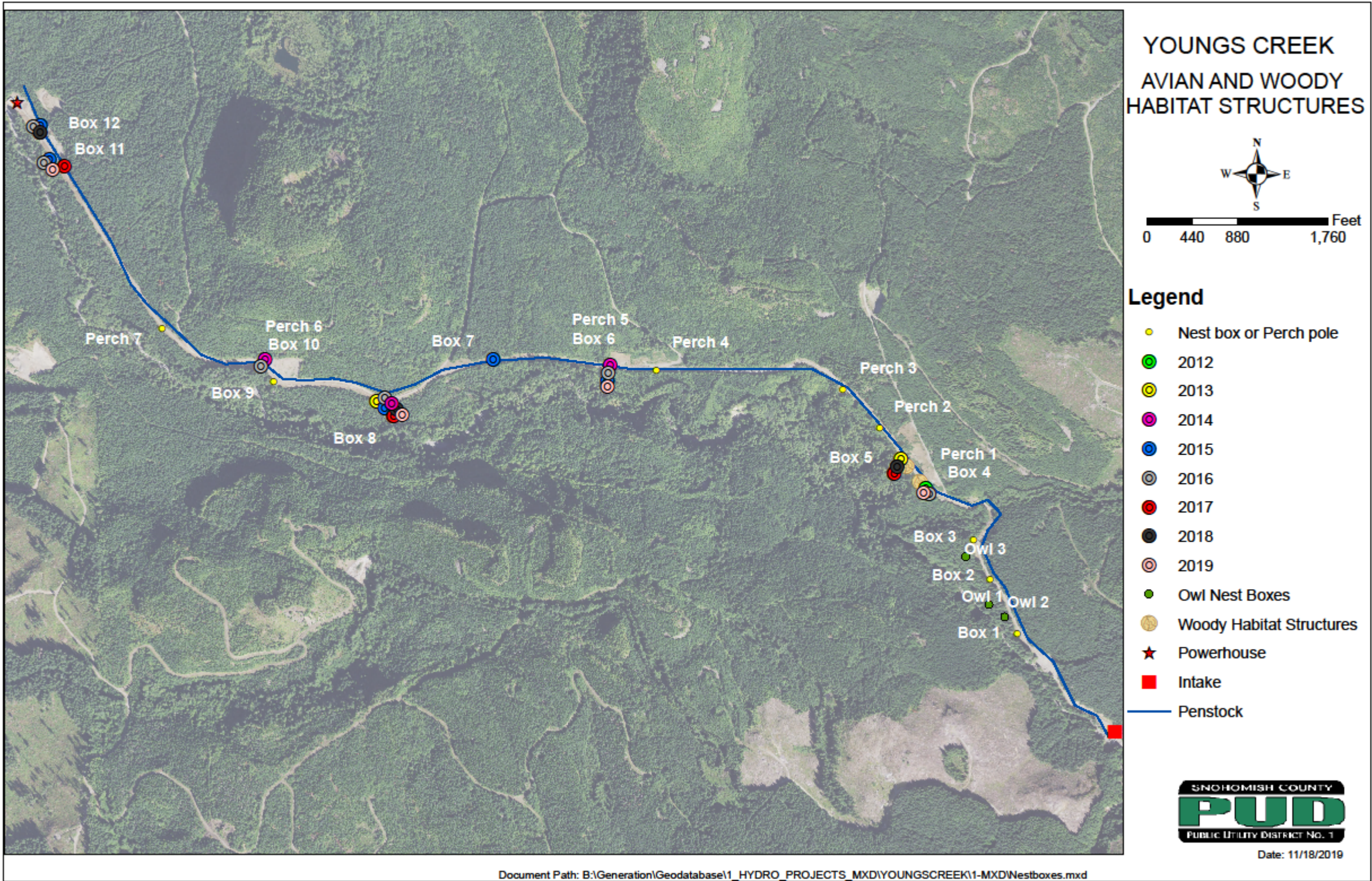


Figure 4. Map showing locations of nest boxes and perch poles.

## **4.2. Raptor Perch Poles**

Seven raptor perch poles were erected on the penstock ROW in late 2011, based on field consultation between WDFW and District biologists. Perch poles were monitored concurrent with monitoring of nest boxes. During site visits in 2019, the immediate vicinity of each perch pole was inspected for signs of raptor use, including whitewash or owl pellets. No use of the perch poles was identified in 2019.

## **5. MITIGATION LANDS**

As required under WHMP Section 3.0(e), 5.3 acres of mitigation lands were put into Critical Area Protection Area (CAPA) status in fall 2009 (Figure 1).<sup>3</sup> Visual observations of the overstory were conducted concurrent with nest box and raptor perch pole checks. The site consists of mature second growth forest, approximately 70 years old, on a steep hillside above Youngs Creek. Tree diameter ranges between approximately 13 inches and 25 inches. Snags and coarse woody debris are present within the site. Understory exists primarily as sword fern and local patches of Devil's club. At this point, habitat is of good quality with natural conditions allowing for development into mature forests.

## **6. LITERATURE CITED**

Bellrose, F.C. and D.J. Holm (eds.) 1994. Ecology and Management of the Wood Duck. Stackpole Books, Mechanicsburg, PA. 588p.

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<sup>3</sup> The 5.3 acres are recorded as CAPA under Snohomish County number 200910160192. The Snohomish County Assessor's property tax parcel/account number is 27083300100200 for this land.

## **APPENDIX A**

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### *Nest Box Monitoring Results*

2019 Nest Box Details			
Box #	Style	Location	2019 Monitoring Results
Box 1	Audubon	Tree Mount in CAPA	4/5/2019: No use
			4/22/2019: No use
			5/3/2019: No use
			5/22/2019: No use
			6/7/2019: No use
			6/25/2019: No use
			7/26/2019: No use
Box 2	Bluebird Trailbox	Tree Mount in CAPA	4/5/2019: No use
			4/22/2019: No use
			5/3/2019: No use
			5/22/2019: No use
			6/7/2019: No use
			6/25/2019: No use
			7/26/2019: No use
Box 3	Audubon	Tree Mount in CAPA	4/5/2019: No use
			4/22/2019: No use
			5/3/2019: No use
			5/22/2019: No use
			6/7/2019: No use
			6/25/2019: No use
			7/26/2019: No use
Box 4	Woodlink	Co-mounted on perch pole	4/5/2019: No use
			4/22/2019: No use
			5/3/2019: No use
			5/22/2019: No use
			6/7/2019: Adult sitting on at least one visible egg
			6/25/2019: Nesting material and feathers visible
			7/26/2019: Feathers/droppings only (fledged)
Box 5	Bluebird Trailbox	Solo mounted on pole	<b>Result: Successful tree swallow nest.</b>
			4/5/2019: No use
			4/22/2019: No use
			5/3/2019: No use
			5/22/2019: No use
			6/7/2019: No use
			6/25/2019: No use
			7/26/2019: No use

Box 6	Bluebird Trailbox	Co-mounted on perch pole	4/5/2019: No use
			4/22/2019: No use
			5/3/2019: Parital nest
			5/22/2019: 1 egg
			6/7/2019: Only nest and feathers visible
			6/25/2019: At least 2 feathered chicks
			7/26/2019: Nest and feathers (fledged)
			<b>Result: Successful tree swallow nest.</b>
Box 7	Audubon	Solo mounted on pole	4/5/2019: No use
			4/22/2019: No use
			5/3/2019: Parital nest
			5/22/2019: Partial nest
			6/7/2019: Partial nest
			6/25/2019: Partial nest
			7/26/2019: Patial nest
			<b>Result: Partial nest built.</b>
Box 8	Coveside Slant front	Solo mounted on pole	4/5/2019: No use
			4/22/2019: No use
			5/3/2019: Parital nest and feathers
			5/22/2019: 6 eggs
			6/7/2019: 5 unfeathered chicks visible
			6/25/2019: Feathers/droppings only (fledged)
			7/26/2019: Feathers/droppings only
			<b>Result: Successful tree swallow nest.</b>
Box 9	Woodlink	Mounted on mature riparian tree	4/5/2019: No use
			4/22/2019: No use
			5/3/2019: No use
			5/22/2019: No use
			6/7/2019: No use
			6/25/2019: No use
			7/26/2019: No use

Box 10	Woodlink	Co-mounted on perch pole	4/5/2019: No use
			4/22/2019: No use
			5/3/2019: 1 feather
			5/22/2019: Nest built
			6/7/2019: Nest and feathers
			6/25/2019: Nest and feathers
			7/26/2019: Nest and feathers only
			<b>Result: Nest built.</b>
Box 11	Coveside Slant front	Solo mounted on pole	4/5/2019: No use
			4/22/2019: No use
			5/3/2019: Partial nest and feathers
			5/22/2019: 5 eggs
			6/7/2019: 6 eggs
			6/25/2019: Feathered chicks
			7/26/2019: Nest and feathers (fledged)
			<b>Result: Successful tree swallow nest.</b>
Box 12	Coveside Slant front	Solo mounted on pole	4/5/2019: No use
			4/22/2019: No use
			5/3/2019: No use
			5/22/2019: No use
			6/7/2019: No use
			6/25/2019: No use
			7/26/2019: No use
Owl Box 1	Coveside Slant front	Forested mitigation parcel	4/5/2019: No use
			5/22/2019: No use
			7/26/2019: No use
Owl Box 2	Coveside Slant front	Forested mitigation parcel	4/5/2019: No use
			5/22/2019: No use
			7/26/2019: No use
Owl Box 3	Coveside Slant front	Forested mitigation parcel	4/5/2019: No use
			5/22/2019: No use
			7/26/2019: No use

## **APPENDIX B**

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### *Consultation Documentation Regarding Draft Reports*

**From:** McDonnell, Andrew  
**Sent:** Friday, November 22, 2019 3:50 PM  
**To:** Applegate, Brock A (DFW); Tim\_Romanski@fws.gov  
**Cc:** Binkley, Keith; Spahr, Jessica; Schutt, Mike; Presler, Dawn  
**Subject:** Draft 2019 Youngs Creek WHMP Annual Report  
**Attachments:** 2019 YC WHMP AnnRpt\_Draft\_to WDFW\_USFWS.pdf

Hi Brock and Tim,

Attached for your review is the Wildlife Habitat Mitigation Plan Draft Annual Report for the Youngs Creek Project. This report summarizes data collected during 2019. Please review and let us know if you have any comments by Monday, December 23, 2019. We will respond to any comments and finalize the report after that date.

Thank you,

Andrew

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