# Wheeler Ridge: Northern Spotted Owl Surveys

FINAL Report

August 10, 2018

Submitted to: Wheeler Ridge, LLC Ben Alworth, Project Manager 4597 Stemilt Hill Rd Wenatchee, WA 98801

Contract: Wheeler Ridge: Northern Spotted Owl Surveys

Project #1806

## **PREPARED BY:**

## WASHINGTON CONSERVATION SCIENCE INSTITUTE

Andrea L. Lyons, MS; William L. Gaines, PhD; James Begley, MS

## Table of Contents

1.0 INTRODUCTION AND OBJECTIVE	. 3
1.1 Background	. 3
2.0 METHODS and RESULTS	. 3
3.0 LITERATURE CITED	. 4
TABLES AND FIGURES	. 5
Table 1. Northern spotted owl survey results for Wheeler Ridge Project Site.	. 5
Figure 1. Location of Wheeler Ridge Proposed Project Area relative to range of northern spotted owl in Washington.	
Figure 2. Location of Wheeler Ridge Proposed Project Area and spotted owl survey route and stations	. 7
Figure 3. Potential northern spotted owl habitat relative to the Wheeler Ridge Proposed Project Area and spotted owl survey route and stations.	
APPENDIX A. Data forms for Wheeler Ridge spotted owl survey visits	. 9

#### 1.0 INTRODUCTION AND OBJECTIVE

Wheeler Ridge, LLC, has proposed orchard development on private land within the Wheeler Ridge area of the Stemilt Basin, approximately 6 miles south of Wenatchee, Washington (Figure 1). The proposed development is located along the eastern edge of the range of the northern spotted owl (*Strix occidentalis caurina*) (Figure 2), in the vicinity of two historical northern spotted owl activity centers and potentially suitable spotted owl habitat.

In the summer of 2018, Washington Conservation Science Institute identified suitable habitat and conducted a series of calling surveys for northern spotted owls in the Wheeler Ridge project area. This survey program was initiated as part of the requirements set forth under Washington State Environmental Policy Act (SEPA) and the Endangered Species Act (ESA), to avoid incidental take.

### 1.1 Background

The proposed development site is located within Section 17 (T21N R20E). This report summarizes the results of the Activity Center Assessment and subsequent surveys. Historical spotted owl data provided by Washington Department of Fish and Wildlife indicated a single owl (unknown status) was located approximately 0.9 miles west of the proposed project area in 1996, and a single resident owl was located approximately 1.8 miles to the south in 1998. Aerial imagery indicates the latter location has been heavily harvested since then. Additional surveys were conducted throughout the Mission Ridge Road and Squilchuck State Park area for the Mission Ridge Road Construction Project in 2005 and 2006 and no spotted owls were detected (US Forest Service pers. comm.).

#### 2.0 METHODS and RESULTS

The Wheeler Ridge spotted owl activity center assessment and survey protocol followed U.S. Fish and Wildlife Service guidelines (USFWS 2012).

#### **Activity Center Assessment**

Activity Center #1224: Resident, territorial single, 1998

The perimeter of the 1.8 mile radius home range circle for this activity center is just adjacent to the proposed project site. Aerial imagery indicates the stand that includes habitat within 0.25 mile of Activity Center #1224 has been removed so this site was not visited.

Activity Center #1189: Single – unknown status, 1996

The 1.8 mile radius home range circle for this activity center overlaps part of the proposed project area. We conducted a daytime search of spotted owl habitat within 0.5 miles of Activity Center #1189. The search effort consisted of walking through potential habitat and spot calling. No spotted owls were detected.

#### **Station Surveys**

We used a combination of spotted owl suitable habitat mapped by Davis et al. (2012), stand data collected for the Wheeler Ridge project (Schellhass 2015), aerial imagery and field validation to identify potential suitable spotted owl habitat within and adjacent to the project site. Vegetation in the project area is dominated by even-aged ponderosa pine and mixed conifer stands that lack canopy cover or old forest structure. Most of the vegetation would not be classified as nesting, roosting and foraging spotted owl habitat, although patches of suitable habitat may be found in the vicinity of the project site. Subsequent field validation indicated vegetation removal within the project site would not impact suitable spotted owl habitat. As a result, we initiated Disturbance Only Surveys. We identified areas with potential suitable habitat within ½ mile of the project site (Figure 3). Habitat on the east side of the project site was of lower quality but was

included in the survey to ensure thorough coverage. Habitat to the west of the project site, toward Activity Center #1189, was of higher quality. We located five survey calling stations across the project area. Calling stations covered an area of approximately 560 acres (assuming approximate calling distance of ¼ mile). Six surveys were conducted within the nesting period March 1 – August 31 (Table 1). Surveys were spaced out over the nesting period, with three visits before June 30 (one per month), and the remaining three visits after June 30. No spotted owls were detected.

Other owl species detected included northern pygmy owls (*Glaucidium gnoma*), great-horned owl (*Bubo virginianus*), and flammulated owls (*Psiloscops fammeolus*). Other wildlife heard during the surveys included common nighthawk (*Chordeiles minor*), wild turkey (*Meleagris gallopavo*), elk (*Cervus elaphus*) and coyote (*Canis latrans*).

#### 3.0 LITERATURE CITED

Schellhass, R. 2015. Report prepared for Wheeler Ridge, LLC. Forest Stewardship Management Plan. 65 pp.

US Fish and Wildlife Service. 2012. Northern spotted owl survey protocol (January 2012).

## TABLES AND FIGURES

Table 1. Northern spotted owl survey results for Wheeler Ridge Project Site.

Visit	Date	Complete Survey	Spotted Owls Detected?
Number			
1	26 April 2018	Yes	No
2	31 May 2018	Yes	No
3	11 June 2018	Yes	No
4	19 July 2018	Yes	No
5	26 July 2018	Yes	No
6	3 August 2018	Yes	No

Figure 1. Location of Wheeler Ridge Proposed Project Area relative to range of northern spotted owl in Washington.

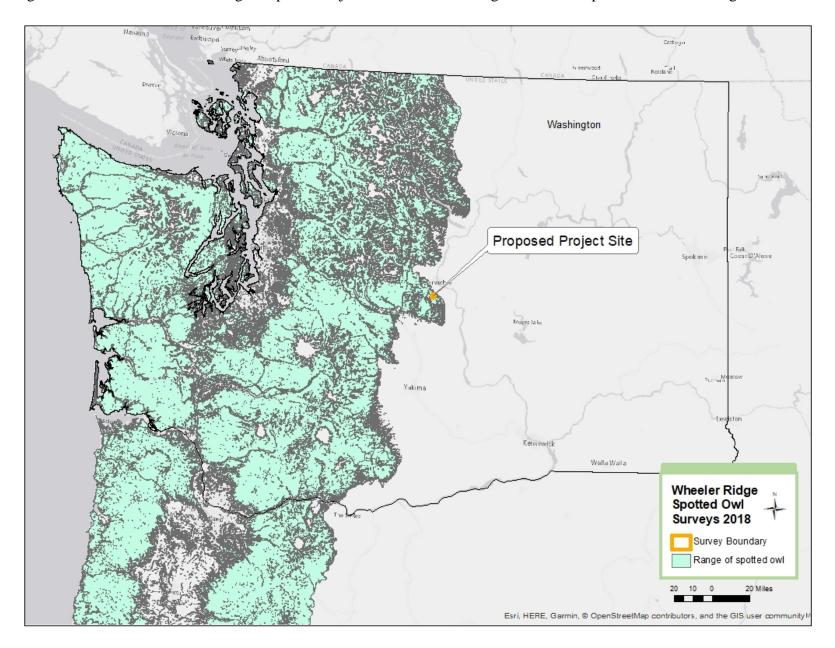


Figure 2. Location of Wheeler Ridge Proposed Project Area and spotted owl survey route and stations.

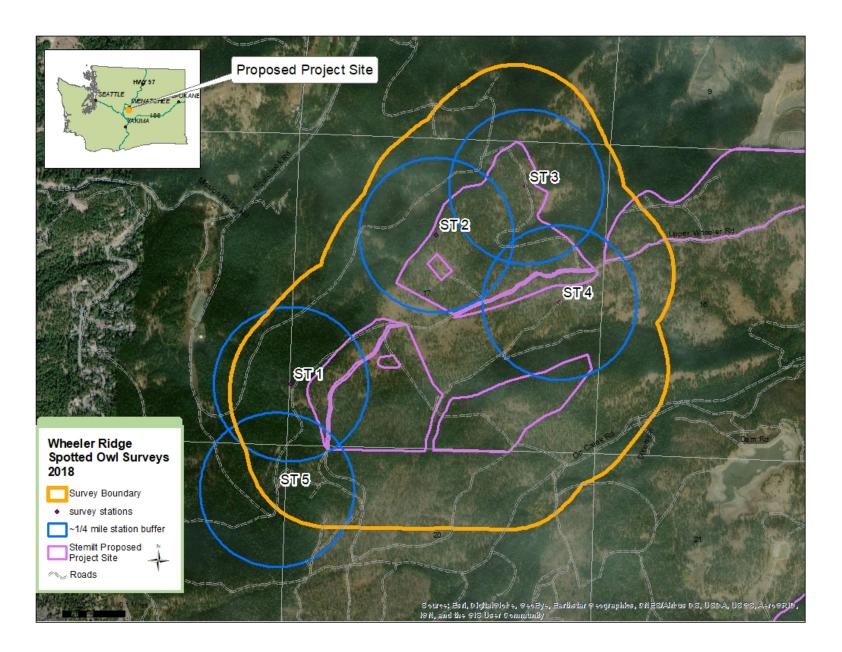
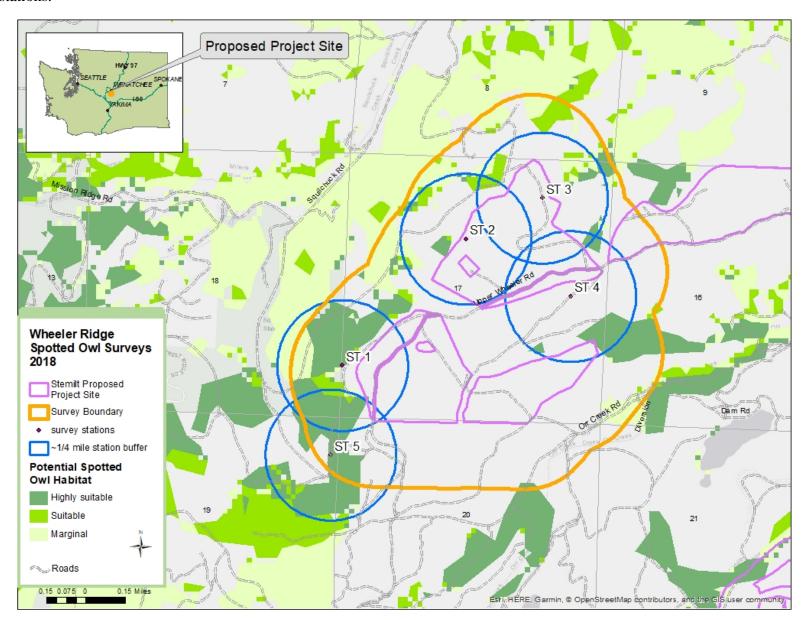


Figure 3. Potential northern spotted owl habitat relative to the Wheeler Ridge Proposed Project Area and spotted owl survey route and stations.



APPENDIX A. Data forms for Wheeler Ridge spotted owl survey visits.

Appe				te Fiel	d Da	ata Collection l	Form					
						SITE NAME_\						_
VISIT	#:	1_	OUTI	NG #:	1	_YEAR: 2018	OUTING	G DA	ATE:	4/2	0110	-
LAND	OWN	ER: <u>2</u>	tem	ilt		PHYSIOGR	КАРҢІС РЕ	ROV	INCE			
COME	LETE	VISI	T: (Y/	N)		OBSERVER	Rs: A !	-YO	ns			
TYPE ACS=Act AV=Addi	ivity Cen	ter Searc	h SC=5	Station Cal	ling (	CC FO	RV FO=Follow Up	Outin	g RV=1	OPP_ Reproductive	Visit	
						ATION (use if h						
OWLS		ECTE End			Sex	Bearing/ Distance	T/R/Sec		1/16	UTM	UTM	7 ~
Station				Type <sup>1</sup>	Sex	Bearing Distance	17 K/Sec	1/4	1/16	East	North	
1	1117	1127	No	re								
2004	1219	1223	Tink	en A	-			-				Tulke Occurs
Ú.			No		-			-		-		Turkey across
5			Now		-	.,					_	OUNDER!
	1,51	100	2	_				-			-	1
												1
								_				4
								_				-
			_		-			_			-	
									-		-	-
					H(							
					10	hsType = V=Visual A=	Audio S=Sign					
Clear	di	20		South			llung	st	MOIN	10		
79 .		00		9011	urug	11		-	101			
Calm	n 50°	r		871	3 /	ride bike	2 h v u A					
Page 4	0					it muddy	- Marie - A					
Page 4	U			9	lad	Stri Milery	(					

SITE	VISIT	FOR	$\mathbf{M}$			ita Collection I				,		
SITE I	D NU	MBE	R: <u>W</u>	R1		SITE NAME V	meeter	K	dges	TATE:	WY	\ 
VISIT	#:	7	ITUC	NG #:	1	YEAR: 2019	OUTING	G DA	ATE:	31 Ma	4201	<u>&amp;</u>
LAND	OWN	ER: _	शुना	W.		PHYSIOGR	RAPHIC PE	ROV	INCE <sub>.</sub>			
COME	PLETE	VISI	T: (Y	/N)	1	OBSERVER	RS: 1	\	MI			
AV=Addi	tional Vis	L SIT	Opport	unistic Siti	ng LOC	CC FO C= Continuous Calling ATION (use if h	istorical si	te ce	nter is	being su	irveved)	buery
OWLS	DET	ECTE	D: (Y	/N)								7
Station	Start	End		Obs Type <sup>1</sup>	Sex	Bearing/ Distance	T/R/Sec	1/4	1/16	UTM East	UTM North	r or la cat bad.
3	1915	1926	Ø									had it is
Ц	2 20	2130	Ø									- Tarkey numbers
2	1942	1953	Ø									had to gibe
1	2015	2025	ø									-More dugs Eurplanes
5	2031	2041	Ø									Eurplanes
												-
					10	heTrune = V=Viewel A=	Audio 9-Pion					

'ObsType = V=Visual A=Audio S=Sign

Page 40

			te Fiel	d Da	ta Collection I	Form							
ID NU	MBE	R:\	NR:	1_	SITE NAME W	HEELEY	2 \$	UDG.	TATE: _	WA	_		
`#:	3	OUTI	NG #:	1	YEAR: 2018	OUTING	G DA	ATE:	11 50	ine_			
OWN	ER: _	Ste	milt	-	PHYSIOGR	RAPHIC PE	ROV	INCE					
PLETE	VISI	T: (Y	N)	1	OBSERVER	s: A	1			/			
tivity Cen	ter Searc	h SC=	Station Ca	ing e	CC FO C= Continuous Calling	RV FO=Follow Up	AV Outing	g RV=R	OPP	Visit			
DRICA R_	L SIT	Sec_	NTER l	LOC. /4	ATION (use if h	istorical sit WEATHE	te ce	nter is Clea	being su	rveyed) 1 × 5	TO °		
S DET	ECTE	D: (Y	/N)								*		
			Obs Type <sup>1</sup>	Sex	Bearing/ Distance	T/R/Sec	1/4	1/16	UTM East	UTM North			
2030	2040	Ø											
2047	2057	Ø											
2166	2116	Ø			.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,								
2130	2140	Puc	my								•		
7155	2200	Fla	na ma a	Lati	X								
2133	ALCS.	1 10	11100	in									
							-						
				10	bsType = V=Visual A=	Audio S=Sign							
ימיט בני	e	0100	vitt	UN		~ PUSSI	ماد	Co	11905	1505Ca	F		
Bui	300					,			3	,			
						he	ard	"W	uw"	but			
ŀÜ						quele	if c	was	chron	nom he	nese		
									1				
					Fullon					e Pari	c by	Uthi Bi	ker
	VISITI ID NU #: DOWN PLETE OF SU tivity Centitional Vis DRICA R 2030 2047 2166 2130	VISIT FOR ID NUMBE.  #:	VISIT FORM  ID NUMBER:  #:	VISIT FORM  ID NUMBER: W?  #:	VISIT FORM  ID NUMBER: WP 1  #:	VISIT FORM  ID NUMBER: WP 1 SITE NAME WRITTED  SH: 3 OUTING #: 1 YEAR: 2018  DOWNER: Hemilt PHYSIOGR  PLETE VISIT: (Y/N) OBSERVER  OF SURVEY: ACS SC CC FO  Totivity Center Search SC=Station Calling=EC=Continuous Calling  Itional Visit OPP=Opportunistic Siting  DRICAL SITE CENTER LOCATION (use if h  R Sec 1/4 1/16  S DETECTED: (Y/N)  Start End SPP Obs Sex Bearing/Distance  Type!  2030 2040 Ø  2130 2140 Pygmy  2155 2205 Flammulated  ObsType=V=Visual A=1  Tomg to the contraction of the	ID NUMBER: WR 1 SITE NAME WHEELEY  ##: 3 OUTING #: 1 YEAR: 2018 OUTING  OWNER: Hemilt PHYSIOGRAPHIC PR  PLETE VISIT: (Y/N) OBSERVERS: A  OF SURVEY: ACS SC CC FO RV  tivity Center Search SC-Station Calling FO-Follow Up  titional Visit OPP-Opportunistic Siting  DRICAL SITE CENTER LOCATION (use if historical sit  R Sec 1/4 1/16 WEATHE  S DETECTED: (Y/N)  Start End SPP Obs Type Bearing/ Distance T/R/Sec  2030 2040 D FORMULA D  2130 2140 Pygmy  2155 2265 F Jam mula D  ObsType = V=Visual A=Audio S=Sign  Pussil  Pussil  OF SURVEY: ACS SC CC FO RV  WEATHER  OF SURVEY: ACS SC CC FO RV  WEATHER  OBSERVERS: A  OF SURVEY: ACS SC CC FO RV  WEATHER  OBSERVERS: ACS SC CC FO RV  Type I Sea Bearing/ Distance T/R/Sec  T/R/Sec  1/4 1/16 WEATHER  OBSERVERS: ACS SC CC FO RV  WEATHER  OBSERVERS: ACS SC CC FO RV  Type I Sea Bearing/ Distance T/R/Sec  S DETECTED: (Y/N)  Start End SPP Obs Scx Bearing/ Distance T/R/Sec  Type I Sea Bearing/ Distance T/R/Sec  S DETECTED: (Y/N)  Start End SPP Obs Scx Bearing/ Distance T/R/Sec  Type I Sea Bearing/ Distance T/R/Sec  Type I	VISIT FORM  ID NUMBER: WP 1 SITE NAME WHEELER F  #: 3 OUTING #: 1 YEAR: 2010 OUTING DA  DOWNER: SHOW! PHYSIOGRAPHIC PROV  PLETE VISIT: (Y/N) OBSERVERS: AL  OF SURVEY: ACS SC CC FO RV AV  tivity Center Search SC-Station Calling—EC-Continuous Calling FO-Follow Up Outin  titional Visit OPP-Opportunistic Siting  ORICAL SITE CENTER LOCATION (use if historical site ce  R Sec 1/4 1/16 WEATHER:  S DETECTED: (Y/N)  Start End SPP Obs Sex Bearing/ Distance T/R/Sec 1/4  2030 2040 D Type Pugwy  2155 2205 Flam mulated  ObsType = V=Visual A=Audio S=Sign  FORSISE  FORM  OBSERVERS: AL  ObsType = V=Visual A=Audio S=Sign  FORSISE  C St 1/4  FORM  OBSERVERS: AL  ObsType = V=Visual A=Audio S=Sign  FORSISE  C St 1/4  FORM  OBSERVERS: AL  OBSERVERS: AL	VISIT FORM  ID NUMBER: WR 1 SITE NAME WHEELER RADES  #: 3 OUTING #: 1 YEAR: 2010 OUTING DATE:  DOWNER: SHOW! PHYSIOGRAPHIC PROVINCE  PLETE VISIT: (Y/N) OBSERVERS: AL.  OF SURVEY: ACS SC CC FO RV AV  Total STE CENTER LOCATION (use if historical site center is R Sec 1/4 1/16 WEATHER: C.) L.  S DETECTED: (Y/N)  Start End SPP Obs Sex Bearing/Distance T/R/Sec 1/4 1/16  2030 2040 D Sex Bearing/Distance T/R/Sec 1/4 1/16  2041 2031 D Sex Bearing/Distance T/R/Sec 1/4 1/16  2050 2140 PUGMY  2155 2265 Flam mulated  "ObsType = V=Visual A=Audio S=Sign  Total Sign  "ObsType = V=Visual A=Audio S=Sign  "ObsType = V=Visual A=Audio S=Sign	VISIT FORM  ID NUMBER: WR 1 SITE NAME WHEELER RIDSTATE:  #: 3 OUTING #: 1 YEAR: 2010 OUTING DATE: 11 JU  DOWNER: SHOW I PHYSIOGRAPHIC PROVINCE  PLETE VISIT: (Y/N) OBSERVERS: A L.  OF SURVEY: ACS SC CC FO RV AV OPP  WEATHER: SC-Station Calling-CC-Continuous Calling FO-Follow Up Outing RV-Reproductive friend Visit OPP-Opportunistic String  ORICAL SITE CENTER LOCATION (use if historical site center is being su  R Sec 1/4 1/16 WEATHER: Claw, Call  SITE End SPP Obs Sex Bearing/Distance T/R/Sec 1/4 1/16 UTM  East  2030 2040 D Sex Bearing/Distance T/R/Sec 1/4 1/16 UTM  East  2047 2057 D Sex Bearing/Distance T/R/Sec 1/4 1/16 UTM  East  2047 2057 D Sex Bearing/Distance T/R/Sec 1/4 1/16 UTM  East  100 PUSSIBLE CONGRES  CONGRES  PUSSIBLE CONGRES  CONGRES  PUSSIBLE CONGRES  CONG	VISIT FORM  ID NUMBER: WR 1 SITE NAME WHEELER RIDETATE: LUA  ##: 3 OUTING #: 1 YEAR: 2010 OUTING DATE: 11 JUNE  DOWNER: SEMIT PHYSIOGRAPHIC PROVINCE  PLETE VISIT: (Y/N) OBSERVERS: A L.  OF SURVEY: ACS SC CC FO RV AV OPP  WIND CENTER LOCATION (use if historical site center is being surveyed)  R Sec 1/4 1/16 WEATHER: CLLUX, CA M X S  DETECTED: (Y/N)  Start End SPP Obs Sex Bearing/Distance T/R/Sec 1/4 1/16 UTM North  2030 2040 D East North  2040 2057 D East North  2050 2140 PUGMED  2130 2140 PUGMED  2130 2140 PUGMED  2130 2140 PUGMED  305 Type V-Visual A-Audio S-Sign  A DOWNER: Sex POSSIBLE CONGRUE IS DESCRIPTION (USE IN MICH ADDITION OF THE CONGRUE IS DESCRIPTION OF THE CONGRUE IS DESCRIPT	ID NUMBER: WR 1 SITE NAME WHEELER BADSTATE: WA  ##: 3 OUTING #: 1 YEAR: 2018 OUTING DATE: 11 JUNE  DOWNER: HEMIT PHYSIOGRAPHIC PROVINCE  PLETE VISIT: (Y/N) OBSERVERS: A L.  OF SURVEY: ACS SC CC FO RV AV OPP  UNIVINCENTE Search SC-Station Calling: FO-Continuous Calling: FO-Follow Up Outing RV-Reproductive Visit  ID RICAL SITE CENTER LOCATION (use if historical site center is being surveyed)  R Sec 1/4 1/16 WEATHER: CLEW, Call M. \$50'  SIDETECTED: (Y/N)  Start End SPP Obs Sex Bearing/Distance T/R/Sec 1/4 1/16 UTM ETM  2030 2040 D Type  ObsType = V=Visual A=Audio S=Sign  ObsType = V=Visual A=Audio S=Sign  PUSSISLE COLIGEN   Subscat  C St 1  Weard "Mew but  Guille a wary from horse  ## It cannot clear.  Too big.	UNITED TO THE PARTY OF THE NAME WHELER PLOSTATE: LUA  #: 3 OUTING #: 1 YEAR: 2018 OUTING DATE: 1 JUNE  #: 3 OUTING #: 1 YEAR: 2018 OUTING DATE: 1 JUNE  DOWNER: HEMIT PHYSIOGRAPHIC PROVINCE  PLETE VISIT: (Y/N)

U.S. F	ish and	Wild	life Se	rvice	160 10 16							
	ndix (			te Fiel	d Da	ata Collection I	Form					
SITE	ID NU	MBE	R:\	NP 1		SITE NAME <u>U</u>	Thee   e	, P	Jacs	TATE:	WA	<u>v</u>
VISIT	*#:	4_	OUTI	NG #: .	1	YEAR: 2018	OUTING	G DA	TE:	19 J	why	
LANI	OOWN	ER: _	810	milt		PHYSIOGR	RAPHIC PR	ROV	INCE			
COM	PLETE	E VISI	T: (Y	/N)	Y	OBSERVER	s: A L	UJV	ns.			
TYPE ACS=Ac AV-Add HISTO	OF SU stivity Cen litional Vi ORICA	JRVE	Y: A h SC- Opport E CE Sec	Station Cal unistic Siti	SC ling C	CC FO CC=Continuous Calling  ATION (use if h	RV FO=Follow Up	A V Outing	g RV=l	OPP Reproductive	· Visit	5
	Start			Obs	Sex	Bearing/ Distance	T/R/Sec	1/4	1/16	UTM	UTM	7
4	2000	2010	Ø	Type						East	North	
2	2019	2000	10 *									as with the dowl
2.	2043	2053	50	dug								call bit breezier on
1	2104	2114	Ø	0								this ende
5	2120	OSAG	Ø									1
												-
											-	_
			process and the part and									_
								_			-	-
				A CO SECULA DESCRIPTION OF							-	1
												1
	J											7
					10	Ds/Type - V-Visual A-4	Audio S-Sign					

Page 40

Apper				te Fiel	d Da	ta Collection I						
				NR 1	-	SITE NAME_	Vheeler Ridge	`	S	TATE:	WA	
						YEAR: 201						
						PHYSIOGR					J	
COMP	LETE	VISI	T: (Y/	N)	1	OBSERVER	s: A	L	100	2,		
TYPE ACS≈Act AV=Addi	ivity Cent	ter Searc	h SC=S	Station Cal	SC Mg G	CC FO	RV	AV	Ĵ	OPP	Visit	
HISTO T	ORICA _R_	L SIT	E CEI	NTER	LOC /4	ATION (use if h	istorical sit WEATHE	R:	517	being su	Jakm	80° c 9pm
OWLS	DETI	ECTE	D: (Y/	N)					1 00 1 1	4) 00	icing	
Station	Start	End	SPP	Obs Type <sup>1</sup>	Sex	Bearing/ Distance	T/R/Sec	1/4	1/16	UTM East	UTM North	
2	2054	211	26 0	Турс						Last	North	
			Y									
3	2116	2121	e Ø		. A .				,			Pygmy
	10.		,			L						
4	2135	2145	Ø									lots of righthawks
<del></del>	2001	2011	0		-							
	000	1	- P									
5	2016	2028	00									airplane
		-										
	-										-	_
	-	-										
		-										
	-	-		,	-	1	-		-		-	-
		-			-			-				
		1			1	1		L				4

\*ObsType = V=Visual A=Audio S=Sign

Page 40

SITE	ID NU	MBE	R: <u>W</u>	R1		SITE NAME_\	Theeler	la	S	TATE:	MH	
VISIT	#:	6	OUTI	NG #:	1	SITE NAME_YEAR:	OUTING	G D	ATE:	3 A	y. 20	918
LANI	OOWN	IER: _	Ste	mil	+	PHYSIOGE	RAPHIC PI	ROV	INCE			
СОМ	PLETE	E VIS	IT: (Y	/N)	Y	OBSERVER	RS: A.	Ly	2 N			
TYPE ACS=Ac AV=Add	OF SI tivity Cen litional Vi	URVE nter Searc sit OPF	EY: A ch SC=	Station Ca	SC)	CC FO CC= Continuous Calling	RV FO=Follow Up	AV	g RV=F	OPP Reproductive	Visit	
T	R_		Sec	1		ATION (use if h						W.
	Start	-		Obs	Sex	Bearing/ Distance	T/R/Sec	1/4	1/16	UTM	UTM	7
4	1941	1951	Ø	Type <sup>1</sup>		~				East	North	
3-	1959	200	7 Ø			- 1-24	de e		-	, .		- 1010
2-	2020	2030	Ø									windier on
1	2034											this side
1			1									
5	2128	2138	) (O									People campe
											1	in pare
												+
												1
	-											1
700 N	shirts	) +:	ירטנעט	d a		bsType = V=Visual A=A	Audio S=Sign					