

# Exhibit L

## Protected Areas

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**Wheatridge Renewable Energy Facility East  
January 2024**

**Prepared for  
Wheatridge East Wind, LLC**

**Prepared by**



**TETRA TECH**

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**Table of Contents**

1.0 Introduction ..... 1

2.0 Analysis Area ..... 1

3.0 Protected Areas Inventory – OAR 345-021-0010(1)(L)(A)(B)..... 1

4.0 Potential Impacts – OAR 345-021-0010(1)(L)(C)..... 13

    4.1 Noise Impacts – OAR 345-021-0010(1)(L)(C)(i)..... 13

    4.2 Traffic Impacts – OAR 345-021-0010(1)(L)(C)(ii) ..... 14

    4.3 Water Use and Wastewater – OAR 345-021-0010(1)(L)(C)(iii)(iv)..... 16

    4.4 Visual Impacts – OAR 345-021-0010(1)(L)(C)(v)(vi) ..... 17

        4.4.1 ZVI Analysis..... 17

5.0 Conclusions..... 21

6.0 References..... 22

**List of Tables**

Table L-1. Protected Areas Inventory, Visual and Noise Assessment Results ..... 3

**List of Figures**

- Figure L-1. Protected Areas
- Figure L-2. Protected Areas Turbine Viewshed
- Figure L-3. Protected Areas Transmission Line Viewshed

## Acronyms and Abbreviations

ACEC	Area of Critical Environmental Concern
ASC	Application for Site Certificate
BLM	Bureau of Land Management
BMP	Best Management Practices
Certificate Holder	Wheatridge East Wind, LLC
Council	Energy Facility Siting Council
Facility	Wheatridge Renewable Energy Facility East
KOP	Key Observation Point
MBTH	maximum blade tip height
MW	megawatt
NPDES	National Pollutant Discharge Elimination System
NWR	National Wildlife Refuge
OAR	Oregon Administrative Rule
ODEQ	Oregon Department of Environmental Quality
ODFW	Oregon Department of Fish and Wildlife
OPRD	Oregon Parks and Recreation Department
RFA 1	Request for Amendment 1
RFA 4	Request for Amendment 4
RNA	Research Natural Area
SNHA	State Natural Heritage Area
TNC	The Nature Conservancy
USFWS	U.S. Fish and Wildlife Service
ZVI	zone of visual influence

## 1.0 Introduction

The Wheatridge Renewable Energy Facility East (Facility) is an approved, but not yet constructed, wind energy generation facility consisting of up to 66 turbines and related or supporting facilities with a peak generating capacity of up to 200 megawatts (MW), to be located in an Approved Site Boundary of approximately 4,582 acres on over 42,000 acres of leased land in Morrow and Umatilla counties, Oregon. As part of Request for Amendment (RFA) 1 to the Facility Site Certificate, Wheatridge East Wind, LLC (Certificate Holder) is proposing to expand wind power generation at the Facility to provide the opportunity for increased power capacity and availability. This includes expanding the Site Boundary and micrositing corridors, increasing the peak generating capacity by adding more and newer turbines, changing the intraconnection routes, and extending the construction date. See the RFA 1's Division 27 document (*Request for Amendment #1 for the Wheatridge Renewable Energy Facility East*) for a more detailed summary of the proposed changes.

This Exhibit L was prepared to meet the submittal requirements in Oregon Administrative Rule (OAR) 345-021-0010(1)(L). Analysis in this exhibit incorporates and/or relies on reference information, analysis, and findings found in the Application for Site Certificate (ASC), previous RFAs, and Oregon Department of Energy Final Orders to demonstrate that the Facility, as modified by RFA 1, continues to comply with applicable Site Certificate conditions and the approval standard in OAR 345-022-0040, and addresses the protected areas outlined in the updated OAR 345-001-0010(26).

## 2.0 Analysis Area

In accordance with OAR 345-001-0010(35)(e), the Analysis Area for protected areas is the area within and extending 20 miles from the site boundary (Figure L-1). The Amended Site Boundary is inclusive of portions of the Approved Site Boundary.

## 3.0 Protected Areas Inventory – OAR 345-021-0010(1)(L)(A)(B)

*OAR 345-021-0010(1)(L) Information about the potential impacts of the proposed facility on protected areas in the analysis area, providing evidence to support a finding by the Council as required by OAR 345-022-0040, including:*

*OAR 345-021-0010(1)(L)(A) A list of all protected areas within the analysis area identifying:*

*(i) The distance and direction of the protected area from the proposed facility;*

*(ii) The basis for protection by reference to a specific subsection of OAR 345-001-0010(26); and*

*(iii) The name, mailing address, phone number, and email address of the land management agency or organization with jurisdiction over the protected area;*

*OAR 345-021-0010(1)(L)(B) A map showing the location of the proposed facility in relation to the protected areas.*

There are two new protected areas located within the Analysis Area since the Final Order on the ASC and RFA 4 were issued<sup>1, 2</sup>, and no protected areas are located within the Amended Site Boundary as proposed by RFA 1. Note that two previously identified protected areas are no longer within the Analysis Area of the proposed Facility: the Willow Creek Wildlife Area and the Umatilla Hatchery. Table L-1 provides an inventory of the 16 protected areas within the Analysis Area and indicates the proximity and direction of each protected area relative to the Amended Site Boundary, the basis for protection under OAR 345-001-0010(26), and the contact information for the relevant land management agencies and organizations. RFA 1 proposes extending the acreage around the Facility, thereby the new sites for the proposed turbines are located at a greater distance from the 16 identified protected areas than previously sited in the ASC/RFA 4. Thus, the impacts will be less than what was previously described in ASC/RFA 4 and approved in the Final Order (see Table L-1). The inventory of protected areas was based on review of best available Geographic Information System data, maps, and the most current information for the categories of protected areas listed in OAR 345-001-0010(26)<sup>3</sup>. Figure L-1 shows the location of the protected areas identified in the Analysis Area.

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<sup>1</sup> Final Order on Application for the Wheatridge Wind Energy Facility (April 2017), p. 154-155

<sup>2</sup> Final Order on Request for Amendment 4 to the Site Certificate for the Wheatridge Wind Energy Facility (November 2019), p. 69-70

<sup>3</sup> Sources: BLM 2022a, BLM 2022b, DSL 2022, NPS 2022a, NPS 2022b, ODFW 2022a, ODFW 2022b, OPRD 2020, OPRD 2022a, OPRD 2022b, OSU 2015, OSU 2022a, OSU 2022b, USFS 2022, USFWS 2022, USGS 2020.

Table L-1. Protected Areas Inventory, Visual and Noise Assessment Results

Protected Areas within 20 Miles of the Amended Site Boundary			Distance to Amended Site Boundary			Direction from Facility	Facility Potentially Visible? (Yes/No) <sup>1</sup>		Visual Analysis Results	Operational Noise Analysis Results (worst-case modeled operational noise level [dBA L <sub>50</sub> ] as applicable)
Applicable Protected Area Category	Land Management Agency Contact Information	Area Name (pale green indicates new protected area)	Wind Turbines		Transmission Line (miles)		Wind Turbines (maximum number of wind turbines visible [turbine visibility ranking])	Transmission Line		
			Distance (miles)	Distance Change Relative to RFA 4/ASC Analyses						
National Parks OAR 345-001-0010(26)(a)	N/A	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
National Monuments OAR 345-001-0010(26)(b)	N/A	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Wilderness Areas OAR 345-001-0010(26)(c)	N/A	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
National Wild, Scenic, or Recreational Rivers OAR 345-001-0010(26)(d)	N/A	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
National Wildlife Refuges OAR 345-001-0010(26)(e)	U.S. Fish and Wildlife Service (USFWS) 72650 Riverview Lane Irrigon, OR 97844 (509) 546-8300 No email listed	Umatilla National Wildlife Refuge	18.50	4.50-mile increase	19.29	N	Yes (51-128 [moderate])	Yes	Negligible Impact. Viewshed analysis indicates potential Facility turbine visibility ranging from minimal to moderate depending on location; however, a far background viewing distance of over 18.50 miles, vegetative screening within the NWR that limits Facility visibility, and views across developed industrial uses and highways indicate that the turbines would not be a prominent feature in the viewshed. Views of the Facility would not interfere with designated wildlife viewing locations. No management direction applicable to preservation of scenic qualities outside of Refuge. Addition of the wind turbines and associated infrastructure would not change the previous conclusion that views of the Facility, if any, would not compromise the purpose of the Refuge.  The up to 27-mile Intraconnection Line route is highly unlikely to be visible or otherwise discernible at the far background viewing distance of over 19.29 miles, and therefore will not contribute to visual contrast from this location.	<26; Background (no increase from approved wind facility)
	USFWS 79870 Reservoir Road	Cold Springs National Wildlife Refuge	13.30	0.80-mile increase	18.99	NE	Yes (51-128 [moderate])	Yes	Negligible Impact. Viewshed analysis indicates potential Facility turbine visibility ranging from minimal to moderate depending on location; however, a far background viewing distance of over 13.30 miles, vegetative screening in portions	<26; Background (no increase from approved wind facility)

Protected Areas within 20 Miles of the Amended Site Boundary			Distance to Amended Site Boundary			Direction from Facility	Facility Potentially Visible? (Yes/No) <sup>1</sup>		Visual Analysis Results	Operational Noise Analysis Results (worst-case modeled operational noise level [dBA L <sub>50</sub> ] as applicable)
Applicable Protected Area Category	Land Management Agency Contact Information	Area Name (pale green indicates new protected area)	Wind Turbines		Transmission Line (miles)		Wind Turbines (maximum number of wind turbines visible [turbine visibility ranking])	Transmission Line		
			Distance (miles)	Distance Change Relative to RFA 4/ASC Analyses						
	Stanfield, OR 97875 (509) 546-8300 No email listed								of the NWR, and views across developed areas and highways indicate that the turbines would not be a prominent feature in the viewshed. Views of the Facility would not interfere with designated wildlife viewing locations. No management direction applicable to preservation of scenic qualities outside of Refuge. Addition of the wind turbines and associated infrastructure would not change the previous conclusion that views of the Facility, if any, would not compromise the purpose of the Refuge.  The up to 27-mile Intraconnection Line is highly unlikely to be visible or otherwise discernible at the far background viewing distance of over 18.99 miles, and therefore will not contribute to visual contrast from this location.	
	USFWS 64 Maple Street Burbank, WA 99323 (509) 546-8300 No email listed	McNary National Wildlife Refuge	18.82	0.82-mile increase	24.45	NE	Yes (51-128 [moderate])	Yes	Negligible Impact. Viewshed analysis indicates potential Facility turbine visibility ranging from minimal to moderate depending on location; the Facility turbines may be visible only from a small area at the far southwestern end of the Refuge; however, a far background viewing distance of over 18.82 miles, vegetative screening in portions of the NWR, and views across developed areas and highways indicate that the turbines would not be a prominent feature in the viewshed. Views of the Facility would not interfere with designated wildlife viewing locations. No management direction applicable to preservation of scenic qualities outside of Refuge. Addition of the wind turbines and associated infrastructure would not change the previous conclusion that views of the Facility, if any, would not compromise the purpose of the Refuge.  The up to 27-mile Intraconnection Line is highly unlikely to be visible or otherwise discernible at the far background viewing distance of over 24.45 miles, and therefore will not contribute to visual contrast from this location.	<26; Background (no increase from approved wind facility)
National Fish Hatcheries OAR 345-001-0010(26)(f)	N/A	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
National Recreation Areas, Scenic Areas, or Special Resources	N/A	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A



Protected Areas within 20 Miles of the Amended Site Boundary			Distance to Amended Site Boundary			Direction from Facility	Facility Potentially Visible? (Yes/No) <sup>1</sup>		Visual Analysis Results	Operational Noise Analysis Results (worst-case modeled operational noise level [dBA L <sub>50</sub> ] as applicable)
Applicable Protected Area Category	Land Management Agency Contact Information	Area Name (pale green indicates new protected area)	Wind Turbines		Transmission Line (miles)		Wind Turbines (maximum number of wind turbines visible [turbine visibility ranking])	Transmission Line		
			Distance (miles)	Distance Change Relative to RFA 4/ASC Analyses						
Management Units OAR 345-001-0010(26)(g)										
Wilderness Study Areas OAR 345-001-0010(26)(h)	N/A	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Federally Land Management Plan Designated Lands OAR 345-001-0010(26)(i)	Bureau of Land Management (BLM) P.O. Box 2965 Portland, OR 97208 (503) 808-6001 Blm_or_so_land_office_mail@blm.gov	Boardman Research Natural Area (RNA)	15.12	12.92-mile increase	7.68	W	Yes (51-128 [moderate])	Yes	Negligible Impact. Viewshed analysis indicates potential Facility turbine visibility ranging from minimal to moderate depending on location at a far background viewing distance of over 15.12 miles; views would include existing wind turbines, power lines and agricultural irrigation equipment, indicating that the Facility turbines would not represent a new or unusual feature in the viewshed and would not be a prominent feature in the viewshed from the RNA. The RNA is located within the Boardman Bombing Range and not accessible to the public, with occasional visits by The Nature Conservancy (TNC) staff for monitoring and maintenance. <sup>2</sup> No management direction applicable to preservation of scenic qualities outside of RNA. Addition of the wind turbines and associated infrastructure would not change the previous conclusion that views of the Facility, if any, would not compromise the purpose of the RNA.  The up to 27-mile Intraconnection Line is highly unlikely to be visible or otherwise discernible at the background viewing distance of over 7.68 miles, and therefore will not contribute to visual contrast from this location.	<26; Background (no increase from approved wind facility)
	BLM P.O. Box 2965 Portland, OR 97208 (503) 808-6001 Blm_or_so_land_office_mail@blm.gov	Oregon Trail Area of Environmental Concern (ACEC), Echo Meadows Interpretive Site	3.17	0.67-mile increase	8.77	N	Yes (51-128 [moderate])	Yes	Low Impact. Viewshed analysis indicates potential Facility turbine visibility ranging from minimal to moderate depending on location at a middleground viewing distance of over 3.17 miles; views would include existing wind turbines, power lines and agricultural irrigation equipment. This site receives low levels of public use, up to a maximum of about 1,200 visitors per year. <sup>3</sup> No management direction applicable to preservation of scenic qualities outside of ACEC. Views of turbines would not compromise the integrity of the remaining evidence of the Oregon Trail at this site. Addition of the wind turbines and associated infrastructure would not change the previous conclusion that views of the Facility, if any, would not compromise the purpose of the ACEC.	<26; Background (no increase from approved wind facility)

Protected Areas within 20 Miles of the Amended Site Boundary			Distance to Amended Site Boundary			Direction from Facility	Facility Potentially Visible? (Yes/No) <sup>1</sup>		Visual Analysis Results	Operational Noise Analysis Results (worst-case modeled operational noise level [dBA L <sub>50</sub> ] as applicable)
Applicable Protected Area Category	Land Management Agency Contact Information	Area Name (pale green indicates new protected area)	Wind Turbines		Transmission Line (miles)		Wind Turbines (maximum number of wind turbines visible [turbine visibility ranking])	Transmission Line		
			Distance (miles)	Distance Change Relative to RFA 4/ASC Analyses						
									The up to 27-mile Intraconnection Line is highly unlikely to be visible or otherwise discernible at the background viewing distance of over 8.77 miles, and therefore will not contribute to visual contrast from this location.	
	BLM P.O. Box 2965 Portland, OR 97208 (503) 808-6001 Blm_or_so_land_office_mail@blm.gov	Horn Butte ACEC	26.70	11.20-mile increase	19.45	W	Yes (51-128 [moderate])	Yes	Negligible Impact. Viewshed analysis indicates potential Facility turbine visibility ranging from minimal to moderate depending on location; however, a far background viewing distance of over 26.70 miles and views of other existing wind farms in the area indicate that the Facility turbines would not represent a new or unusual feature in the viewshed and would not be a prominent feature in the viewshed from the ACEC. No management direction applicable to preservation of scenic qualities outside of ACEC. Addition of the wind turbines and associated infrastructure would not change the previous conclusion that views of the Facility, if any, would not compromise the purpose of the ACEC.  The up to 27-mile Intraconnection Line is highly unlikely to be visible or otherwise discernible at the far background viewing distance of over 19.45 miles, and therefore will not contribute to visual contrast from this location.	<26; Background (no increase from approved wind facility)
	Threemile Canyon Farms 75906 Threemile Road Boardman, OR 97818 (541) 481-9274 medgecomb@rdoffutt.com	Boardman Grasslands Managed Area	14.11	N/A	25.77	W	Yes (51-128 [moderate])	Yes	Negligible Impact. Viewshed analysis indicates potential Facility turbine visibility ranging from minimal to moderate depending on location at a far background viewing distance of over 14.11 miles; views would include existing wind turbines, power lines and agricultural irrigation equipment, indicating that the Facility turbines would not represent a new or unusual feature in the viewshed and would not be a prominent feature in the viewshed from the resource. No management direction applicable to preservation of scenic qualities outside of resource. Addition of the wind turbines and associated infrastructure would not change the previous conclusion that views of the Facility, if any, would not compromise the purpose of the resource.  The up to 27-mile Intraconnection Line is highly unlikely to be visible or otherwise discernible at the far background viewing distance of over 25.77 miles, and therefore will not contribute to visual contrast from this location.	<26; Background
State Parks, Waysides, Corridors,	Oregon Parks and Recreation	Hat Rock State Park	17.22	0.72-mile increase	22.95	NE	Yes (51-128 [moderate])	Yes	Negligible Impact. Viewshed analysis indicates potential Facility turbine visibility ranging from minimal to moderate depending on location; however, a far background viewing	<26; Background (no increase from approved wind facility)

Protected Areas within 20 Miles of the Amended Site Boundary			Distance to Amended Site Boundary			Direction from Facility	Facility Potentially Visible? (Yes/No) <sup>1</sup>		Visual Analysis Results	Operational Noise Analysis Results (worst-case modeled operational noise level [dBA L <sub>50</sub> ] as applicable)
Applicable Protected Area Category	Land Management Agency Contact Information	Area Name (pale green indicates new protected area)	Wind Turbines		Transmission Line (miles)		Wind Turbines (maximum number of wind turbines visible [turbine visibility ranking])	Transmission Line		
			Distance (miles)	Distance Change Relative to RFA 4/ASC Analyses						
Monuments, Historic, or Recreation Areas OAR 345-001-0010(26)(j)	Department (OPRD) 725 Summer Street NE, Suite C Salem, OR 97301 (541) 567-5032 park.info@oregon.gov								distance of over 17.22 miles, and views toward the Facility that include existing transmission lines, highways and urbanized areas, indicate that the turbines would not be a prominent feature in the viewshed, if visible at all. The turbines may be visible only from high ground in the park and would likely not be discernible from developed use areas. The direction of the Facility from the park indicates that the turbines are unlikely to feature in views of Hat Rock from common vantage points in the park. Addition of the wind turbines and associated infrastructure would not change the previous conclusion that views of the Facility, if any, would not compromise the purpose of the RNA.  The up to 27-mile Intraconnection Line is highly unlikely to be visible or otherwise discernible at the far background viewing distance of over 22.95 miles, and therefore will not contribute to visual contrast from this location.	
	OPRD 725 Summer Street NE, Suite C Salem, OR 97301 (541) 983-2277 park.info@oregon.gov	Battle Mountain Forest State Scenic Corridor	17.69	N/A	22.55	SE	Yes (51-128 [moderate])	Yes	Negligible Impact. Viewshed analysis indicates potential Facility turbine visibility ranging from minimal to moderate depending on location; however, a far background viewing distance of over 17.69 miles and views of other existing wind farms in the area indicate that the Facility turbines would not represent a new or unusual feature in the viewshed and would not be a prominent feature in the viewshed from the protected area. No management direction applicable to preservation of scenic qualities outside of the Corridor. Addition of the wind turbines and associated infrastructure would not change the previous conclusion that views of the Facility, if any, would not compromise the purpose of the Corridor.  The up to 27-mile Intraconnection Line is highly unlikely to be visible or otherwise discernible at the far background viewing distance of over 22.55 miles, and therefore will not contribute to visual contrast from this location.	<26; Background
Willamette River Greenway OAR 345-001-0010(26)(k)	N/A	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Oregon Register of Natural Areas Designated Natural Areas	The Nature Conservancy	Lindsay Prairie Preserve/State Natural Heritage Area (SNHA)	9.43	9.33-mile increase	2.34	W	Yes (51-128 [moderate])	Yes	Low Impact. Viewshed analysis indicates potential Facility turbine visibility ranging from minimal to moderate depending on location at a background viewing distance of over 9.43 miles; the Facility turbines would be most	<26; Background (no increase from approved wind facility)

Protected Areas within 20 Miles of the Amended Site Boundary			Distance to Amended Site Boundary			Direction from Facility	Facility Potentially Visible? (Yes/No) <sup>1</sup>		Visual Analysis Results	Operational Noise Analysis Results (worst-case modeled operational noise level [dBA L <sub>50</sub> ] as applicable)
Applicable Protected Area Category	Land Management Agency Contact Information	Area Name (pale green indicates new protected area)	Wind Turbines		Transmission Line (miles)		Wind Turbines (maximum number of wind turbines visible [turbine visibility ranking])	Transmission Line		
			Distance (miles)	Distance Change Relative to RFA 4/ASC Analyses						
OAR 345-001-0010(26)(l)	821 SE 14th Avenue Portland, OR 97214 (503) 802-8100 oregon@tnc.org								visible/distinguishable from the eastern and southeastern portion of the Preserve. The Preserve is fenced, gated and locked and has no developed facilities; although it is publicly accessible, it receives very little public use. <sup>4</sup> The Preserve is protected for preservation of native vegetation and wildlife, and there is no management direction related to scenic quality except as related to vegetation within the Preserve. Addition of the wind turbines and associated infrastructure would not change the previous conclusion that views of the Facility, if any, would not compromise the purpose of the Preserve.  The up to 27-mile Intraconnection Line is likely to be visible at the middleground viewing distance of over 2.34 miles; views would include existing wind turbines, power lines and agricultural irrigation equipment, indicating that the Facility Intraconnection Line (and in turn the proposed turbines) would not represent a new or unusual feature in the viewshed and would not be a prominent feature in the viewshed from the Preserve.	
South Slough National Estuarine Research Reserve OAR 345-001-0010(26)(m)	N/A	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
State Scenic Waterways OAR 345-001-0010(26)(n)	N/A	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
State Wildlife Refuges or Management Areas OAR 345-001-0010(26)(o)	Oregon Department of Fish and Wildlife (ODFW) 73471 Mytinger Lane Pendleton, OR 97801 (541) 276-2344 odfw.info@odfw.oregon.gov	Columbia Basin - Irrigon Wildlife Area	16.74	0.24-mile increase	22.37	N	Yes (21-50 [low])	No	Negligible Impact. Viewshed analysis indicates potential Facility turbine visibility ranging from minimal to low depending on location; the Facility turbines may be visible only from a small area at the far western end of the Wildlife Area. The far background viewing distance of over 16.74 miles, likely screening of views by existing vegetation, and views of the Facility that would include other industrial and urbanized areas indicate that the turbines would not represent an unusual feature in the viewshed and would not be prominent. No management direction applicable to preservation of scenic qualities outside of the Wildlife Area. Addition of the wind turbines and associated infrastructure would not change the previous conclusion that views of the	<26; Background (no increase from approved wind facility)

Protected Areas within 20 Miles of the Amended Site Boundary			Distance to Amended Site Boundary			Direction from Facility	Facility Potentially Visible? (Yes/No) <sup>1</sup>		Visual Analysis Results	Operational Noise Analysis Results (worst-case modeled operational noise level [dBA L <sub>50</sub> ] as applicable)
Applicable Protected Area Category	Land Management Agency Contact Information	Area Name (pale green indicates new protected area)	Wind Turbines		Transmission Line (miles)		Wind Turbines (maximum number of wind turbines visible [turbine visibility ranking])	Transmission Line		
			Distance (miles)	Distance Change Relative to RFA 4/ASC Analyses						
								Facility, if any, would not compromise the purpose of the Wildlife Area.  The up to 27-mile Intraconnection Line route would not be visible at the far background viewing distance of over 22.37 miles, and therefore will not contribute to visual contrast from this location.		
	ODFW 73471 Mytinger Lane Pendleton, OR 97801 (541) 276-2344 odfw.info@odfw.oregon.gov	Columbia Basin - Power City Wildlife Area	14.97	0.37-mile increase	20.87	N	Yes (51-128 [moderate])	No	Negligible Impact. Viewshed analysis indicates potential Facility turbine visibility ranging from minimal to moderate depending on location; due to terrain screening, the turbines may be visible only from a small area at the far northeastern end of the Wildlife Area, in an area where there are no developed use facilities and no apparent trails. The far background viewing distance of over 14.97 miles, and views of the Facility that would include other industrial and urbanized areas indicate that the turbines would not represent an unusual feature in the viewshed and would not be prominent. No management direction applicable to preservation of scenic qualities outside of the Wildlife Area. Addition of the wind turbines and associated infrastructure would not change the previous conclusion that views of the Facility, if any, would not compromise the purpose of the Wildlife Area.  The up to 27-mile Intraconnection Line route would not be visible at the far background viewing distance of over 20.87 miles, and therefore will not contribute to visual contrast from this location.	<26; Background (no increase from approved wind facility)
	ODFW 73471 Mytinger Lane Pendleton, OR 97801 (541) 276-2344 odfw.info@odfw.oregon.gov	Columbia Basin - Coyote Springs Wildlife Area	19.45	5.45-mile increase	19.01	NW	Yes (51-128 [moderate])	Yes	Negligible Impact. Viewshed analysis indicates potential Facility turbine visibility ranging from minimal to moderate depending on location; the Facility turbines may be visible only from the far northwestern half of the Wildlife Area. The far background viewing distance of over 19.45 miles and views in context with existing urban/industrial development, highway and existing wind farm, indicate that the turbines would not represent an unusual feature in the viewshed, and would not be prominent. No management direction applicable to preservation of scenic qualities outside of the Wildlife Area. Addition of the wind turbines and associated infrastructure would not change the previous conclusion that views of the Facility, if any, would not compromise the purpose of the Wildlife Area.	<26; Background (no increase from approved wind facility)

Protected Areas within 20 Miles of the Amended Site Boundary			Distance to Amended Site Boundary			Direction from Facility	Facility Potentially Visible? (Yes/No) <sup>1</sup>		Visual Analysis Results	Operational Noise Analysis Results (worst-case modeled operational noise level [dBA L <sub>50</sub> ] as applicable)
Applicable Protected Area Category	Land Management Agency Contact Information	Area Name (pale green indicates new protected area)	Wind Turbines		Transmission Line (miles)		Wind Turbines (maximum number of wind turbines visible [turbine visibility ranking])	Transmission Line		
			Distance (miles)	Distance Change Relative to RFA 4/ASC Analyses						
									The up to 27-mile Intraconnection Line is highly unlikely to be visible or otherwise discernible at the far background viewing distance of over 19.01 miles, and therefore will not contribute to visual contrast from this location.	
State Fish Hatcheries OAR 345-001-0010(26)(p)	ODFW 74135 Riverview Lane Irrigon, OR 97844 (541) 922-5732 odfw.info@odfw.oregon.gov	Irrigon Hatchery	18.37	0.36-mile increase	23.27	N	Yes (51-128 [moderate])	No	Negligible Impact. Viewshed analysis indicates potential Facility turbine visibility ranging from minimal to moderate depending on location; however, a far background viewing distance of over 18.37 miles, potential for partial vegetation screening, and views across an urbanized area and highways render an overall low visual impact. No management direction applicable to preservation of scenic qualities outside of the Hatchery. Addition of the wind turbines and associated infrastructure would not change the previous conclusion that views of the Facility, if any, would not compromise the purpose of the Hatchery.  The up to 27-mile Intraconnection Line would not be visible at the far background viewing distance of over 23.27 miles, and therefore will not contribute to visual contrast from this location.	<26; Background (no increase from approved wind facility)
	ODFW 73471 Mytinger Lane Pendleton, OR 97801 (541) 276-2344 odfw.info@odfw.oregon.gov	Three Mile Adult Holding Fish Hatchery	14.18	0.28-mile increase	20.02	N	Yes (51-128 [moderate])	Yes	Negligible Impact. Viewshed analysis indicates potential Facility turbine visibility ranging from minimal to moderate depending on location; however, a far background viewing distance of over 14.18 miles and views across an urbanized area and highways render an overall low visual impact. No management direction applicable to preservation of scenic qualities outside of the Hatchery. Addition of the wind turbines and associated infrastructure would not change the previous conclusion that views of the Facility, if any, would not compromise the purpose of the Hatchery.  The up to 27-mile Intraconnection Line is highly unlikely to be visible or otherwise discernible at the far background viewing distance of over 20.02 miles, and therefore will not contribute to visual contrast from this location.	<26; Background (no increase from approved wind facility)
Oregon State University (OSU) Designated Agricultural Experiment Stations, Experimental	OSU 2121 S 1st Street Hermiston, OR 97838 (541) 567-8321 natalie.kinion@oregonstate.edu	Oregon State University Hermiston Agricultural Research and Extension Center	9.59	0.39-mile increase	15.51	N	Yes (21-50 [low])	Yes	Negligible Impact. Viewshed analysis indicates low potential Facility turbine visibility; however, a far background viewing distance of over 9.59 miles, and views in context with existing urban/industrial development, highway and an existing wind farm indicate that the turbines would not be a prominent feature in the viewshed. No management direction applicable to preservation of scenic qualities outside of the Center. Addition of the wind turbines and	<26; Background (no increase from approved wind facility)

Protected Areas within 20 Miles of the Amended Site Boundary			Distance to Amended Site Boundary			Direction from Facility	Facility Potentially Visible? (Yes/No) <sup>1</sup>		Visual Analysis Results	Operational Noise Analysis Results (worst-case modeled operational noise level [dBA L <sub>50</sub> ] as applicable)
Applicable Protected Area Category	Land Management Agency Contact Information	Area Name (pale green indicates new protected area)	Wind Turbines		Transmission Line (miles)		Wind Turbines (maximum number of wind turbines visible [turbine visibility ranking])	Transmission Line		
			Distance (miles)	Distance Change Relative to RFA 4/ASC Analyses						
Areas, or Research Centers OAR 345-001-0010(26)(q)									associated infrastructure would not change the previous conclusion that views of the Facility, if any, would not compromise the purpose of the Center.  The up to 27-mile Intraconnection Line is highly unlikely to be visible or otherwise discernible at the far background viewing distance of over 15.51 miles, and therefore will not contribute to visual contrast from this location.	
Oregon State University Designated Research Forests OAR 345-001-0010(26)(r)	N/A	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

1. Indicates potential visibility of any part of the wind turbines (up to 499 feet), Intraconnection Line (up to 150 feet), or other Facility components as determined through viewshed analysis. Both heights are the same as what was previously approved in the ASC.  
2. Information on access and use obtained through a personal communication from Kelly Wallis, The Nature Conservancy, July 18, 2022.  
3. Information on access and use obtained through a personal communication from Brian Woolf, BLM Vale District, Baker Office, July 13, 2022.  
4. Information on access and use obtained through a personal communication from Dalles Field Office representative, The Nature Conservancy, January 24, 2022.

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## 4.0 Potential Impacts – OAR 345-021-0010(1)(L)(C)

*OAR 345-021-0010(1)(L)(C) A description of significant potential impacts of the proposed facility, if any, on the protected areas including, but not limited to, potential impacts such as:*

### 4.1 Noise Impacts – OAR 345-021-0010(1)(L)(C)(i)

*(i) Noise resulting from facility construction or operation;*

Table L-1 provides a summary of operational noise levels from the Facility at protected areas within the Analysis Area. As previously found by the Energy Facility Siting Council (Council), noise generated by the construction and operation phases of the Facility is unlikely to cause significant adverse noise impacts to protected areas.<sup>4, 5</sup> Exhibit Y provides an assessment of the existing acoustical environment and anticipated Facility sound levels; the methodology for noise modeling is detailed in that exhibit. As noted in Exhibit Y, sound generated by an operating turbine includes both mechanical sound and aerodynamic sound. The dominant noise component for wind farms is aerodynamic sound, which refers to the sound produced by air flow around the turbine blades and the tower. Construction activities associated with construction of the additional wind turbines and related or supporting facilities would be similar to the construction noise already reviewed by Council for the Facility.

Exhibit Y describes sound level thresholds derived from the Oregon Department of Environmental Quality (ODEQ) noise regulations (OAR 340-035-0035), which are used to assess the significance of impacts to noise sensitive properties. As defined in OAR 340-035-0035, “noise sensitive properties” are “real property normally used for sleeping, or normally used as schools, churches, hospitals or public libraries. Property used in industrial or agricultural activities is not Noise Sensitive Property unless it meets the above criteria in more than an incidental manner.”

Based on the results of modeling, as described in detail in Exhibit Y, operation of the additional wind turbines and related or supporting facilities would not create new noise impacts to protected areas beyond those that were previously identified for the Facility. Facility noise (including turbines, battery energy storage system, Intraconnection Line, and substations) would attenuate to below 26 A-weighted decibels (dBA), or less than the background noise level, within approximately 2 miles from the Amended Site Boundary. All 16 protected areas are located more than 2 miles from the Amended Site Boundary so would not be affected by Facility turbine operation or other Facility noise. The two closest sites are the Lindsay Prairie Preserve/SNHA and the Oregon Trail ACEC/Echo Meadows Interpretive Site located approximately 2.2 miles and 2.5 miles from the Amended Site Boundary, respectively (and approximately 9.43 miles and 3.17 miles to the nearest turbines, and 2.34 miles and 8.77 miles to the transmission line, respectively). At Lindsay Prairie

<sup>4</sup> Final Order on Application for the Wheatridge Wind Energy Facility (April 2017), p. 155-157

<sup>5</sup> Final Order on Request for Amendment 4 to the Site Certificate for the Wheatridge Wind Energy Facility (November 2019), p. 70-72

Preserve/SNHA, the worst-case modeled operational noise level would be less than approximately 20 A-weighted decibels, significantly below rural ambient background noise levels; this is due to being closest in proximity to the proposed transmission line as opposed to the turbines. This is less than the noise level previously modeled for the approved wind facility. Modeled worst-case operational noise levels at the Oregon Trail ACEC/Echo Meadows Interpretive Site would be higher; no more than 23 dBA (projected higher than the Lindsay Prairie Preserve/SNHA due to being closer in proximity to the proposed turbines as opposed to the proposed transmission line). The worst-case noise level of 23 dBA is also significantly below rural ambient background noise level and less than the noise level previously modeled for the approved wind facility. As previously described for the approved Facility, the closest protected areas, the Lindsay Prairie Preserve/SNHA and the Oregon Trail ACEC/Echo Meadows Interpretive Site, are not areas normally used for sleeping (which is also true of all of the other protected areas) and has minimal daytime use, so are not considered noise sensitive properties. Therefore, the ODEQ noise regulations do not apply. The audible operations noise would not interfere with the primary purpose of these sites, which is the preservation of a remnant tract of native grassland and of a portion of the Oregon National Historic Trail, respectively.

The remainder of the identified protected areas in the Analysis Area would similarly be unaffected by Facility operational noise, due to their locations of over 7.5 miles from the Amended Site Boundary and over 9.59 miles to the nearest turbines. Noise from construction would similarly be less than 26 dBA and effectively inaudible in all but the two closest protected areas, Lindsay Prairie Preserve/SNHA and the Oregon Trail ACEC/Echo Meadows Interpretive Site. Pursuant to OAR 340-035-0035(5), noise from construction activities is exempt from the state noise standards. Noise-generating activities during construction could result from the use of heavy machinery, such as heavy trucks, bulldozers, graders and cranes. Based on the estimated noise levels of construction equipment provided in Exhibit Y, construction noise levels at the Lindsay Prairie Preserve/SNHA and the Oregon Trail ACEC/Echo Meadows Interpretive Site would peak at approximately 35 and 34 dBA, respectively; this noise level is comparable to a quiet library. These elevated noise levels would occur sporadically -- generally 9 to 11 days of construction, over a period of about 3 to 4 weeks -- while the access roads, Intraconnection Line (specifically close to the Lindsay Prairie Preserve/SNHA), and turbines closest to the Lindsay Prairie Preserve/SNHA and the Oregon Trail ACEC/Echo Meadows Interpretive Site are built. As construction progresses elsewhere in the Facility, noise levels would drop to background levels. At this time, pending geo-technical investigation of the final layout, blasting is not anticipated to be required for Facility construction.

#### **4.2 Traffic Impacts – OAR 345-021-0010(1)(L)(C)(ii)**

##### *(ii) Increased traffic resulting from facility construction or operation;*

Traffic impacts are addressed in greater detail in Exhibit U, which provides additional information on anticipated traffic volumes, peak construction traffic times, potential delays and temporary road closures; mitigation measures that would be implemented by the Certificate Holder and the construction contractor to avoid significant traffic impacts; and required coordination with Oregon

Department of Transportation and county road officials for necessary road improvements (if applicable), road closures, and permits for construction and oversized load movements.

As previously found by the Council, no significant traffic impacts to protected areas are anticipated from construction or operation of the Facility.<sup>6, 7</sup> Ten of the protected areas are located north of Interstate 84 (I-84) and would be virtually unaffected by Facility traffic, which would be concentrated on a small number of roads south of I-84. No truck traffic associated with the Facility would occur north of I-84, and construction worker traffic would be dispersed on many roads in the area, rather than concentrated on any one road such that access to any protected area north of I-84 could be adversely affected. Of the six protected areas located south of I-84, only the Boardman RNA, Boardman Grasslands Managed Area, Lindsay Prairie Preserve/SNHA, and the Oregon Trail ACEC/Echo Meadows Interpretive Site are likely to experience impacts from Facility traffic; the Horn Butte ACEC and the Battle Mountain Forest State Scenic Corridor are accessed by routes that would not carry Facility-related truck traffic. Construction worker traffic may occur on roads providing access to these areas; however, construction worker traffic would be dispersed on many roads in the area, and the level of worker traffic anticipated would not adversely affect Level of Service on those roads (see Exhibit U).

As described in Exhibit U, construction traffic associated with the additional wind turbines and related or supporting facilities would be similar or less than what was previously reviewed and approved for construction of the original wind turbines in the Final Order on the ASC and RFA 4.<sup>8, 9</sup> However, the four aforementioned protected areas south of I-84 are likely to experience impacts from Facility construction traffic because they are accessed by roads that would also carry Facility construction traffic (Bombing Range Road, Juniper Lane, and Oregon Route 207 (OR-207)). Specifically, the Boardman RNA, Boardman Grasslands Managed Area, Lindsay Prairie Preserve/SNHA, and the Oregon Trail ACEC/Echo Meadows Interpretive Site may experience access disruptions or delays for brief periods due to delivery of Facility materials or construction equipment. These impacts will be intermittent and temporary, and traffic levels would return to normal following construction. However, as noted in Table L-1, none of these protected areas experience significant public usage and are visited infrequently by management staff, so there are few users to be affected by construction traffic. No roads providing access to protected areas are expected to be closed during construction or operation of the Facility. The Certificate Holder will continue to employ Best Management Practices (BMPs) as described in Exhibit U to ensure that access restrictions to any protected area will be temporary and timed to avoid peak traffic flow. Following construction, traffic levels will return to normal. Note that the Certificate Holder has previous experience utilizing similar transportation routes for constructing facilities (i.e., the

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<sup>6</sup> Final Order on Application for the Wheatridge Wind Energy Facility (April 2017), p. 157-158

<sup>7</sup> Final Order on Request for Amendment 4 to the Site Certificate for the Wheatridge Wind Energy Facility (November 2019), p. 72-73

<sup>8</sup> Final Order on Application for the Wheatridge Wind Energy Facility (April 2017), p. 157-158

<sup>9</sup> Final Order on Request for Amendment 4 to the Site Certificate for the Wheatridge Wind Energy Facility (November 2019), p. 72-73

Wheatridge Renewable Energy Facilities) and in turn working with the Morrow County Road Department; no public use impacts have been noted to date.

The operational phase of the Facility will not generate additional amounts of traffic that could adversely affect protected areas from what was previously analyzed and approved.<sup>10, 11</sup> Typical operational traffic would be minimal, as the Facility as modified by RFA 1 would permanently employ only approximately 5 to 10 personnel. Larger amounts of traffic would be generated only if a turbine would need significant repairs or replacement. In that event, some roads would experience higher traffic levels, and visitor travel to some areas may be disrupted or delayed for brief periods during delivery of materials or equipment. However, these impacts would be rare, intermittent and temporary, and would not represent significant adverse impacts to any identified protected area.

#### **4.3 Water Use and Wastewater – OAR 345-021-0010(1)(L)(C)(iii)(iv)**

*(iii) Water use during facility construction or operation;*

*(iv) Wastewater disposal resulting from facility construction or operation;*

As previously found by the Council, no significant water or wastewater impacts to protected areas are anticipated from the Facility.<sup>12, 13</sup> Similarly, no significant water or wastewater impacts to protected areas are anticipated from the Facility as modified by RFA 1. During construction, water will be acquired from licensed sources in the vicinity of the Facility and transported to construction areas; this is part of the traffic impact discussed above and in Exhibit U. As described in Exhibit O, no ground or surface water withdrawals will take place for construction of the Facility beyond those already permitted for existing water suppliers. During operation, the Facility would have minimal water needs that would be fulfilled through the use of an exempt well at the shared/existing operations and maintenance building. Water used during Facility construction or operation will continue to not impact water availability or use at protected areas.

Wastewater, in this context, refers to stormwater runoff and to sanitation wastewater; no industrial wastewater would be produced during construction or operation of the Facility. Stormwater runoff will continue to be managed on site according to the BMPs as described in the National Pollutant Discharge Elimination System (NPDES) 1200-C/Erosion and Sediment Control Plan (see Exhibit I) such that no stormwater will leave the Amended Site Boundary. No protected area would be affected by stormwater runoff from the Facility. Sanitation wastewater during construction will continue to be contained in portable toilets, to be provided and maintained by a licensed contractor. Wastewater generated at the shared/existing operations and maintenance building during Facility operation will be handled by an on-site septic system, to be permitted prior to construction. No

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<sup>10</sup> Final Order on Application for the Wheatridge Wind Energy Facility (April 2017), p. 157-158

<sup>11</sup> Final Order on Request for Amendment 4 to the Site Certificate for the Wheatridge Wind Energy Facility (November 2019), p. 72-73

<sup>12</sup> Final Order on Application for the Wheatridge Wind Energy Facility (April 2017), p. 158

<sup>13</sup> Final Order on Request for Amendment 4 to the Site Certificate for the Wheatridge Wind Energy Facility (November 2019), p. 73-74

protected area would be impacted by sanitation wastewater related to the Facility. Exhibit O provides additional information on water use and Exhibit W provides information on wastewater.

As previously found by the Council in the Final Order on the ASC and RFA 4, the addition of wind turbines and related or supporting facilities will not alter the conclusion that there will be no significant impacts to protected areas due to water use at the Facility.<sup>14, 15</sup>

#### **4.4 Visual Impacts – OAR 345-021-0010(1)(L)(C)(v)(vi)**

*(v) Visual impacts of facility structures or plumes, including, but not limited to, changes in landscape character or quality; and*

*(vi) Visual impacts from air emissions resulting from facility construction or operation, including, but not limited to, impacts on Class 1 Areas as described in OAR 340-204-0050.*

The Council previously found that while the Facility components would result in a change to the existing viewshed of the protected areas, the visual impacts of construction and operation of the Facility would not likely result in a significant adverse impact to any protected area due to the low impact to users, no specified management of scenic or visual qualities (or designated views or viewsheds), and presence of similar structures within the existing viewshed.<sup>16, 17</sup> The inclusion of additional wind turbines and associated infrastructure at the Facility, as described in RFA 1, will result in potential new visual impacts to include views of additional turbines (up to 499 feet, the same as previously approved for the Facility) and the Intraconnection Line. All other associated approved and proposed Facility equipment will generally be subordinate to the additional wind turbines and the Intraconnection Line. Class I areas, as defined in OAR 340-204-0050, consist of the 12 federally designated Wilderness Areas in Oregon; none of which are located within the Analysis Area.

The Facility would not generate any emissions plumes, so would not cause any visual impacts from air emissions. Potential visual impacts due to dust created during construction of the Facility will be largely prevented by following BMPs for dust control as detailed in Exhibit O.

##### **4.4.1 ZVI Analysis**

Visual impacts of the Facility are primarily related to views of the turbines, and to a lesser degree, other facilities such as the Intraconnection Line, access roads, shared/existing operations and maintenance building, and substations. Some of the protected areas are represented as Key Observation Points (KOPs) in the analysis of visual impacts in Exhibit R; these are noted below as applicable.

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<sup>14</sup> Final Order on Application for the Wheatridge Wind Energy Facility (April 2017), p. 158

<sup>15</sup> Final Order on Request for Amendment 4 to the Site Certificate for the Wheatridge Wind Energy Facility (November 2019), p. 73-74

<sup>16</sup> Final Order on Application for the Wheatridge Wind Energy Facility (April 2017), p. 158-162

<sup>17</sup> Final Order on Request for Amendment 4 to the Site Certificate for the Wheatridge Wind Energy Facility (November 2019), p. 74-76

In evaluating the visual impacts, the Certificate Holder first determined whether the Facility would be visible from each protected area using digital bare earth modeling. The analysis began with a zone of visual influence (ZVI) analysis (also known as a viewshed or visibility analysis), using Environmental Systems Research Institute ArcGIS software, to identify the areas from which the proposed Facility turbines might be visible.

To assess the potential visibility of the structures, the ZVI analysis was performed for the turbine layout and associated Intraconnection Line route (Figures L-2 and L-3). The analysis assumed 100% of the maximum blade tip height (MBTH), utilizing the proposed MBTH of 152.1 meters (499 feet). Additionally, a maximum height of 45.7 meters (150 feet) was assumed for the Intraconnection Line. A viewing height of 1.8 meters (6 feet) was assumed. Visibility of Facility infrastructure was further defined by proximity, i.e., foreground (<0.5 miles), middleground (0.5 to 5 miles), or background distances (> 5 miles).

It should be noted that this bare-earth modeling approach (based only on the effects of terrain on visibility) results in a highly conservative assessment of potential visibility for several reasons. First, a bare-earth analysis does not take into account the effects of vegetation or buildings, which will in practice block or screen views in some places. Second, by using a MBTH that is 10 percent taller than the turbine being analyzed, the ZVI analysis indicates potential visibility beyond what would actually occur. In addition, in some areas where the analysis indicates Facility structures would be visible, the only visible components might be the tips of the turbine blades at MBTH, which would likely be noticeable only at relatively close viewing distances. Finally, the model does not account for distance, lighting, weather, and atmospheric attenuation factors that diminish visibility under actual field conditions. Figure L-2 shows the areas from which the wind turbines would likely be visible; the number of turbines potentially visible is indicated by color coding. Figure L-3 shows the areas from which the Intraconnection Line would likely be visible, also indicated by color coding.

Based on the results of the ZVI analysis, there would be visibility of some portions of the Facility from all 16 protected areas in the Analysis Area (see Figures L-1 through L-3 and Table L-1). Turbine visibility is characterized as minimal (20 or fewer turbines potentially visible), low (21 to 50 turbines visible), or moderate (51 to 128 turbines visible).

Potential visibility is one of several factors that comprise an assessment of visual impact to a recreation resource. Other factors to consider include the existing visual context, particularly other sources of visual contrast present within the view; the likely number and nature of visitors to a recreation area; and whether there is any management direction related to preservation of scenic quality, either within the recreation area or outside of it. Table L-1 provides a summary of the visual impact assessment for each of the 16 protected areas in the Analysis Area. Table L-1 also considers the visibility of the approximately 27-mile Intraconnection Line for the Facility.

The proposed Facility turbines would potentially be visible from all protected areas and the Intraconnection Line would be visible from all protected areas except the Columbia Basin Irrigon Wildlife Area and the Columbia Basin Power City Wildlife Area. Turbine visibility ranges from minimal to moderate depending on specific location. The visual impact is considered to be

negligible for most protected areas, primarily due to their distance of 7.5 to 20 miles from the Amended Site Boundary. Views of the Facility turbines for most protected areas would therefore be at a background viewing distance where the apparent size of the turbines is greatly diminished, and the turbines would occupy a limited portion of the total viewshed. Many of the protected areas currently have views of other wind farms, transmission lines, and urban and industrial development so the Facility would not introduce a new or unusual feature to the view. In addition, potential Facility views from some of the protected areas would be partially to fully screened by vegetation, terrain, and man-made structures.

Two of the protected areas closest to the Facility would have middleground views of the Facility. These areas are the Lindsay Prairie Preserve/SNHA and the Oregon Trail ACEC/Echo Meadows Interpretive Site. The following paragraphs provide a more in-depth visual impact assessment for these two protected areas.

#### *4.4.1.1 Lindsay Prairie Preserve/SNHA*

The Lindsay Prairie Preserve/SNHA is located approximately 2.2 miles northwest of the Amended Site Boundary. This site is protected for restoration and preservation of native vegetation and wildlife. At the Lindsay Prairie Preserve/SNHA the visual impact of the Facility is considered to be low. The visibility analysis indicates minimal (0 to 20 turbines) to moderate (51 to 128 turbines) turbine visibility depending on location at a background viewing distance of at least 9.43 miles (the proximity of the closest turbine). Notably, Facility turbines would be most visible/distinguishable from the eastern and southeastern portion of the Preserve. The visibility analysis also indicates visibility of the Intraconnection Line at a middleground viewing distance of at least 2.34 miles. However, views of the Intraconnection Line (and in turn, the proposed turbines) would not present a new or unique feature as compared to existing wind turbines, power lines and agricultural irrigation equipment in the viewshed. Additionally, there are very few users of the Preserve that would be affected by these visual impacts. The Preserve is fenced, the access gated and locked, camping is prohibited, and there are no developed facilities or trails of any kind. Although the site is open to the public, The Nature Conservancy (TNC) reports that it receives no known public use and is only occasionally visited by TNC staff<sup>18</sup>. Views of the Facility would not compromise the purpose of the Preserve, and would affect few users for a short duration. Additionally, the site is not managed for its scenic qualities, except as related to vegetation within the site; views of the Facility would not interfere with this purpose.

#### *4.4.1.2 Oregon Trail ACEC/Echo Meadows Interpretive Site*

The Oregon Trail ACEC is located approximately 2.5 miles of the northeast of the Amended Site Boundary; this site is also known as the Echo Meadows Interpretive Site. It is a 320-acre parcel managed by the BLM for preservation and enjoyment of the remaining evidence of the Oregon Trail. Visitors can hike along a paved trail to see nearly one mile of intact wagon ruts and read interpretive signs about the area and its history. At the Oregon Trail ACEC/Echo Meadows

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<sup>18</sup> Pers. comm. from Dalles Field Office representative, The Nature Conservancy, January 24, 2022.

Interpretive Site the visual impact of the Facility is considered to be low. The visibility analysis indicates minimal (0 to 20 turbines) to moderate (51 to 128 turbines) turbine visibility depending on location at a middleground viewing distance of at least 3.17 miles (the proximity of the closest turbine).

Views from KOP 3, as discussed in Exhibit R, confirm these findings. The visual simulation (Figure R-5) shows visible turbines between 3.4 to over 6 miles from the viewpoint; the nearest turbines would be at least 3.17 miles from the remaining Oregon Trail ruts within the site. Some of the turbines would be skylined, but with the long viewing distance the turbines would appear comparable in size or smaller than the existing man-made features evident in the view. Some portions of the western portion of the Facility would also be visible, but at a far background distance of over 15 miles these would be barely noticeable. The existing views include evident vertical modifications including a power line, irrigation pivots, and existing wind turbines in the background, and the viewing distance is relatively long, reducing the apparent size of the turbines.

The visibility analysis also indicates visibility of the Intraconnection Line at a background viewing distance of at least 8.77 miles. Views would include existing wind turbines, power lines and agricultural irrigation equipment, indicating that the Facility turbines and Intraconnection Line would not represent new or unique features in the viewshed and would not be prominent features in the viewshed from the ACEC. This site receives fairly low levels of public use<sup>19</sup>. The site is managed to preserve scenic quality under the BLM Visual Resource Management system; however, the VRM system applies only to actions that occur within the boundaries of the site and does not apply outside the boundaries of BLM ownership. There are no designated views or viewsheds associated with this ACEC. Therefore, there is no management direction applicable to preservation of scenic qualities outside of the ACEC. Views of turbines would neither interfere with the enjoyment of nor compromise the integrity of the remaining evidence of the Oregon Trail at this site.

#### *4.4.1.3 Visual Impact Summary*

Based on this analysis, the Certificate Holder concludes that there would be no significant visual impacts to protected areas within the Analysis Area. While all of the protected areas would have some level of Facility visibility, for most protected areas the Facility would be in the background, and the turbines would not represent a new or unusual feature in the landscape because there are already wind turbines visible. For the two closest protected areas that would have middleground views of either the Facility turbines (i.e., the Oregon Trail ACEC/Echo Meadows Interpretive Site) or the Intraconnection Line (i.e., the Lindsay Prairie Preserve/SNHA), the resulting impact is more closely related to the use and management direction than to views of the turbines. The Lindsay Prairie Preserve/SNHA is accessible to the public but receives negligible public use; views of the turbines from this area would affect very few users and would not interfere with the purpose of the area. Similarly, the Oregon Trail ACEC/Echo Meadows Interpretive Site receives a low level of

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<sup>19</sup> Site receives up to an estimated maximum of about 1,200 visitors per year (pers. comm. from Brian Woolf, BLM Vale District, Baker Office, July 13, 2022).



public use, and views of the turbines would not interfere with the purpose for which this site is preserved. Only a few of the protected areas have any management direction related to scenic quality, and that direction does not apply to siting of the Facility outside of the protected areas. Additionally, views from most of the protected areas already include wind turbines, transmission lines, and other industrial infrastructure or urbanized areas, indicating that viewers cannot reasonably expect pristine views free of wind turbines. Therefore, the addition of the wind turbines and related or supporting facilities to the Facility will not result in a significant adverse visual impact to protected areas. As modified by RFA 1, views of the Facility will continue to be dominated by existing wind turbines and other infrastructure.

## **5.0 Conclusions**

The Analysis Area contains all or part of 16 protected areas. The Certificate Holder analyzed potential impacts to these areas and concluded as follows:

- **Noise.** Based on the results of the noise modeling presented in Exhibit Y, operational noise was determined to likely be less than 26 dBA, which is consistent with a rural background ambient according to OAR 340-035-0035, at all 16 protected areas within the Analysis Area. Construction noise may be audible in some protected areas nearest the Facility; however, construction noise would be short-term and intermittent, and would not be considered a significant impact to any protected area. Therefore, the addition of the wind turbines and associated infrastructure to the approved Facility would result in no significant difference in operational or construction noise at the 16 protected areas within the Analysis Area.
- **Traffic.** The addition of the wind turbines and associated infrastructure to the approved Facility would not alter the previous analysis demonstrating that Facility-related traffic would not be sufficiently high, nor located to significantly impact any protected areas. Some short-term, intermittent and temporary delays may be experienced during Facility construction by visitors attempting to reach four of the protected areas; however, these would be temporary and traffic conditions would return to typical low levels following construction. Therefore, consistent with previous conclusions for the approved wind turbines and related or supporting facilities, there would be no significant impact to traffic resulting from the construction or operation of the Facility.
- **Water.** The Facility would not use water in sufficient quantities or from sources that would significantly impact any protected areas. Therefore, consistent with previous conclusions for the approved wind turbines and related or supporting facilities, there would be no significant impacts to protected areas by water use at the Facility.
- **Wastewater.** The addition of the wind turbines and associated infrastructure to the approved Facility would not change the fact that the Facility would manage its very limited quantities of wastewater on-site and would thus not significantly impact any protected areas. Therefore, consistent with previous conclusions for the approved wind turbines and

related or supporting facilities, there would be no significant impacts to protected areas due to wastewater generated at the Facility.

- Visual. The Facility would potentially be visible from all 16 protected areas in the Analysis Area, with two of the 16 protected areas in the Analysis Area having middleground views as compared to background views. However, due to distance from the Facility, topographic obstructions, other features within view (i.e. wind turbines and other infrastructure), low user numbers at the nearest sites, and an overall lack of management direction applicable to scenic quality beyond the boundaries of each protected area, the addition of the wind turbines and associated infrastructure to the approved Facility would not alter the Council's previous finding that the Facility would not have a significant visual impact on any protected area.

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# Figures

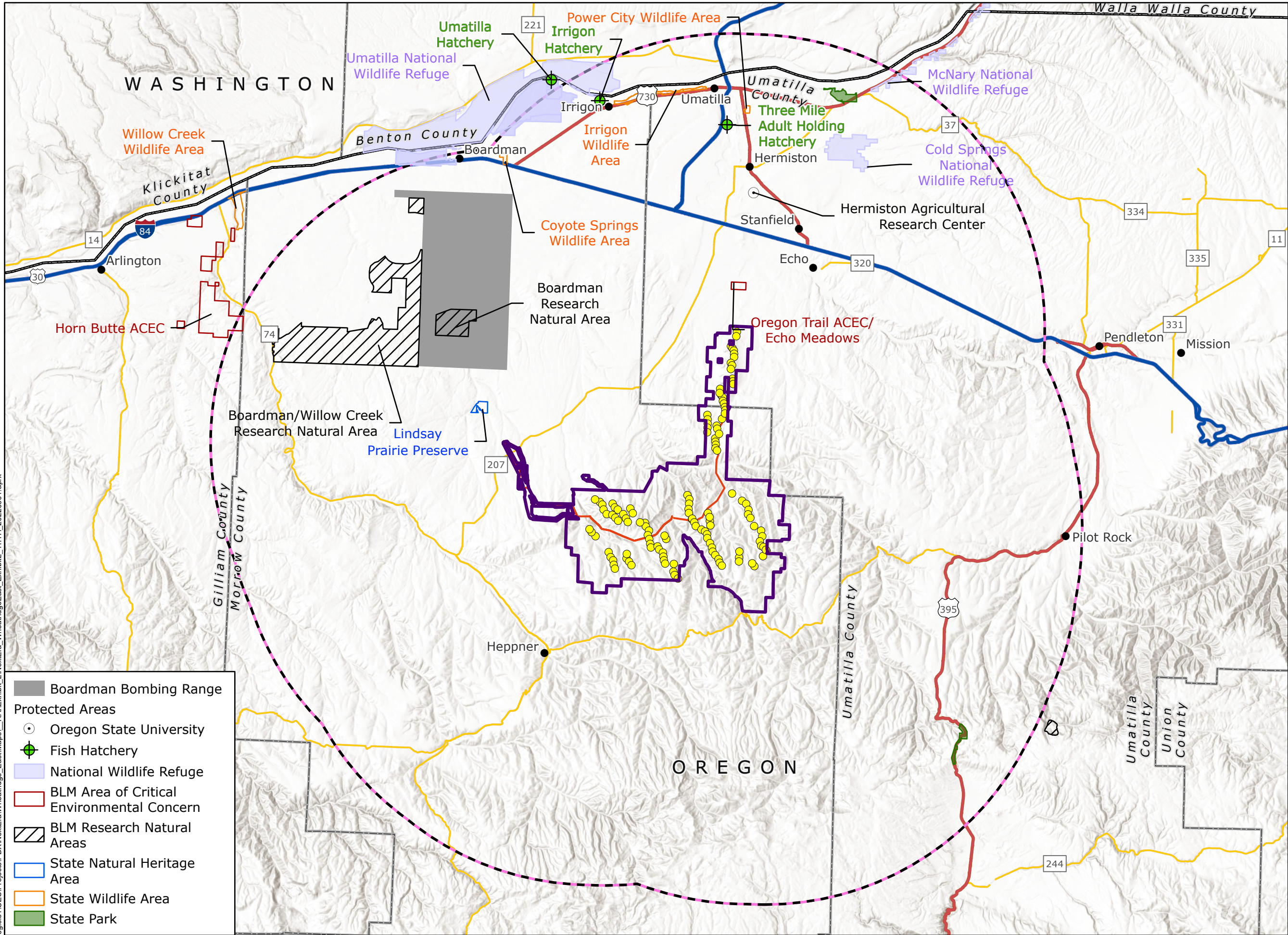
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# Wheatridge Renewable Energy Facility East

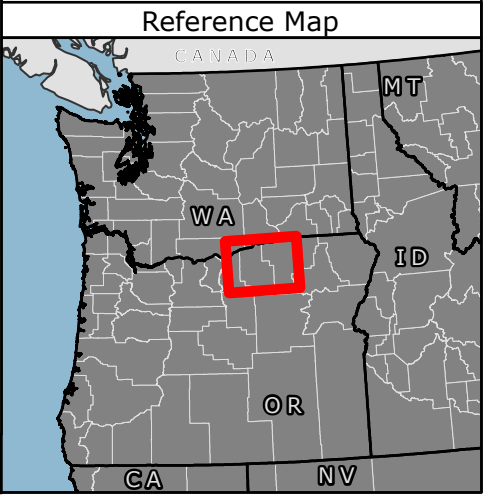
## Figure L-1 Protected Areas

MORROW AND UMATILLA COUNTIES, OR

-  Amended Site Boundary
-  Analysis Area (20-mile buffer)
-  Turbines
-  Transmission Line
-  State Boundary
-  County Boundary
-  City/Town
-  Interstate Highway
-  US Highway
-  State Highway



-  Boardman Bombing Range
- Protected Areas**
-  Oregon State University
-  Fish Hatchery
-  National Wildlife Refuge
-  BLM Area of Critical Environmental Concern
-  BLM Research Natural Areas
-  State Natural Heritage Area
-  State Wildlife Area
-  State Park



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# Wheatridge Renewable Energy Facility East

## Figure L-2 Protected Areas Turbine Viewshed

MORROW AND UMATILLA COUNTIES, OR

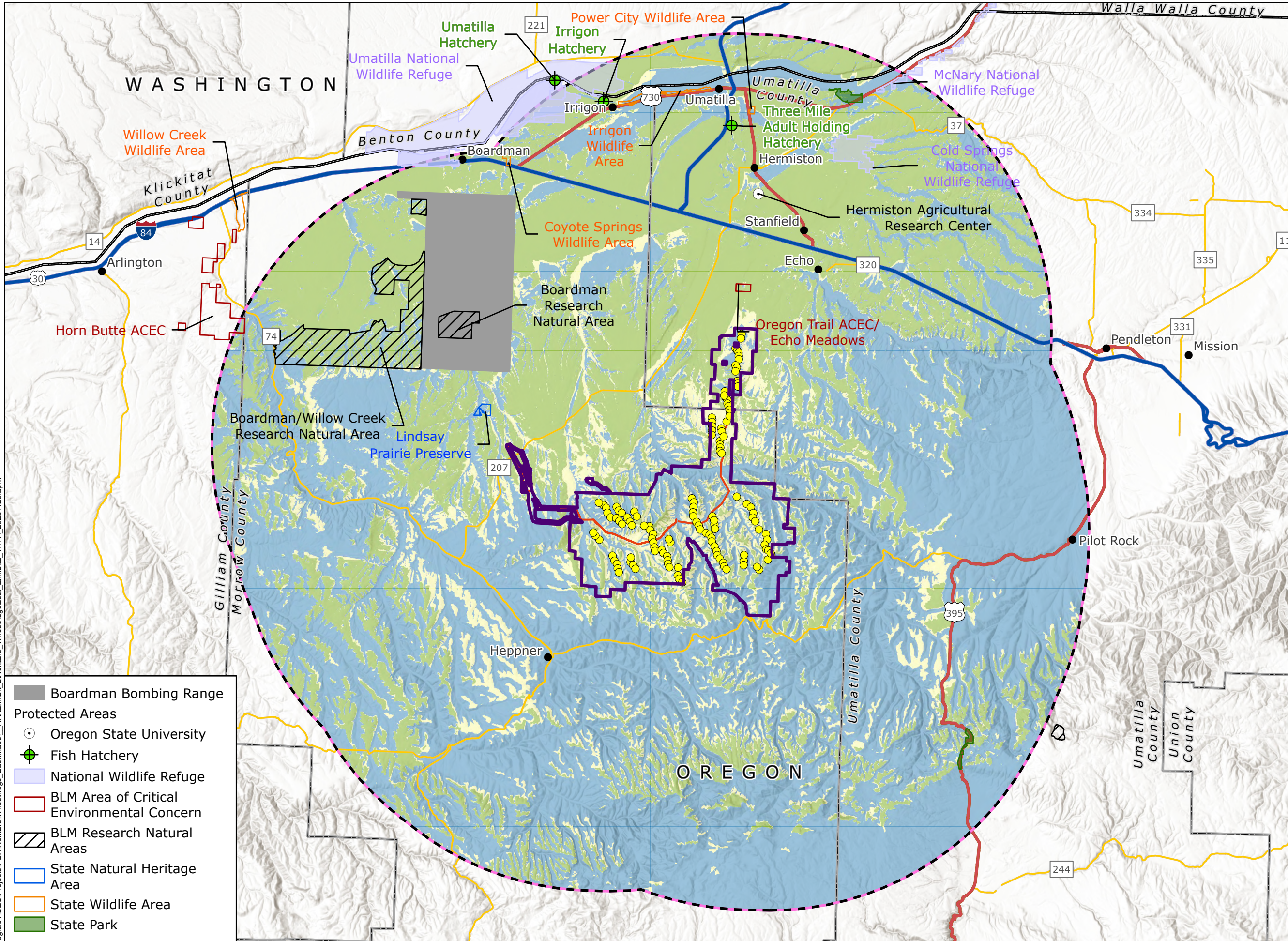
- Amended Site Boundary
- Analysis Area (20-mile buffer)
- State Boundary
- County Boundary
- City/Town
- Interstate Highway
- US Highway
- State Highway
- Turbines
- Transmission Line

- Viewshed**
- Number of Turbines Visible\*
- 0 - 20 (Minimal)
  - 21 - 50 (Low)
  - 51 - 128 (Moderate)

\*Potential turbine visibility calculated using a 10 meter bare-earth digital elevation model with turbine heights of 499 feet (152.09 meters) representing 100% Maximum Blade Tip Height and a viewing height of 6 feet (1.8 meters).



### Reference Map



- Boardman Bombing Range
- Protected Areas**
- Oregon State University
- Fish Hatchery
- National Wildlife Refuge
- BLM Area of Critical Environmental Concern
- BLM Research Natural Areas
- State Natural Heritage Area
- State Wildlife Area
- State Park

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# Wheatridge Renewable Energy Facility East

## Figure L-3 Protected Areas Transmission Line Viewshed

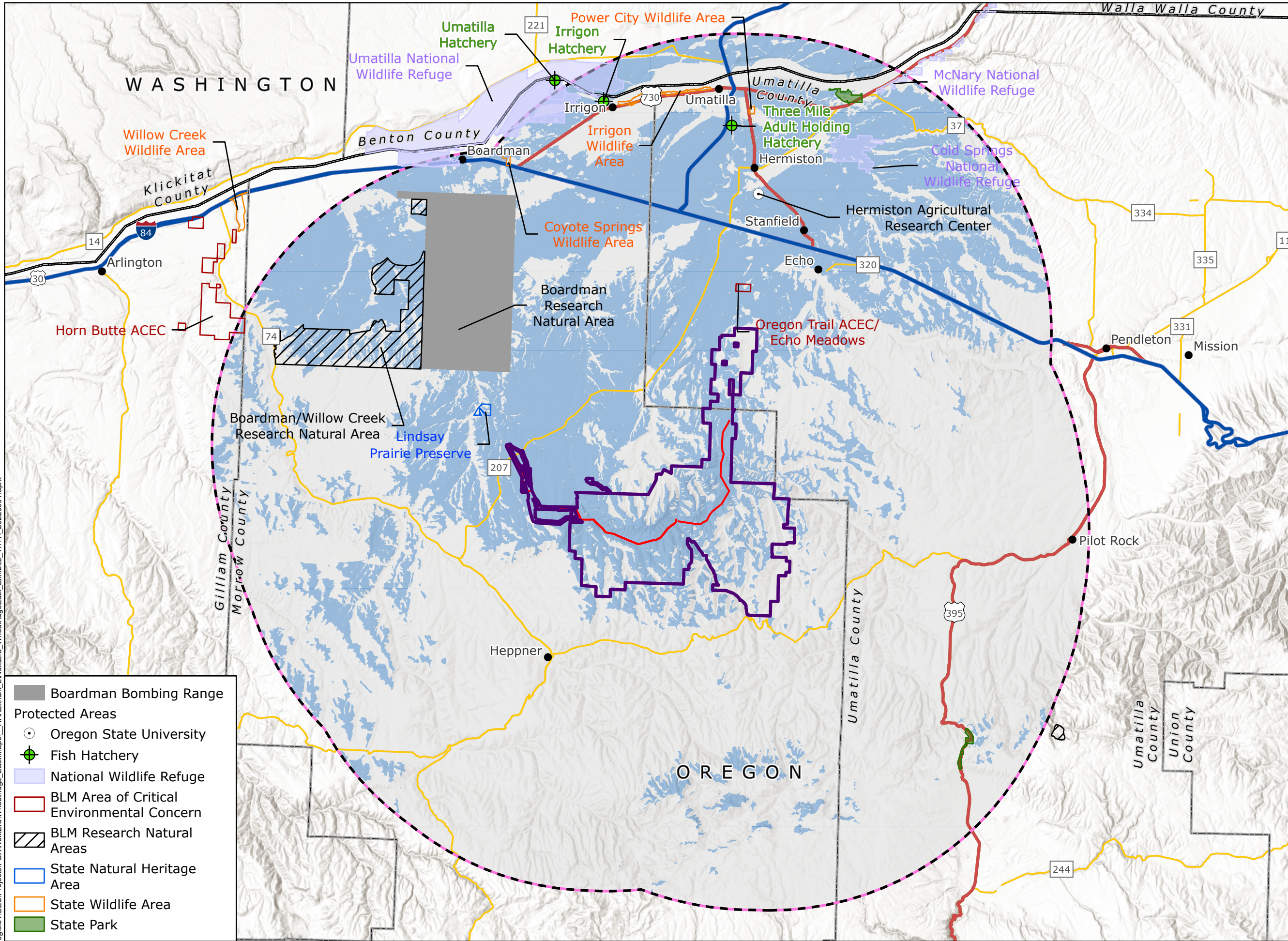
MORROW AND UMATILLA COUNTIES, OR

- Amended Site Boundary
  - Analysis Area (20-mile buffer)
  - State Boundary
  - County Boundary
  - City/Town
  - Interstate Highway
  - US Highway
  - State Highway
  - Transmission Line
- Viewshed Results\*
- Transmission Line Not Visible
  - Transmission Line Potentially Visible

\*Potential transmission line visibility calculated using a 10 meter bare-earth digital elevation model with transmission line height of 150 feet (45.72 meters) and a viewing height of 6 feet (1.8 meters).



### Reference Map



- Boardman Bombing Range
- Protected Areas**
- Oregon State University
- Fish Hatchery
- National Wildlife Refuge
- BLM Area of Critical Environmental Concern
- BLM Research Natural Areas
- State Natural Heritage Area
- State Wildlife Area
- State Park

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