

Exhibit L

Protected Areas

**Wagon Trail Solar Project
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Prepared for



Prepared by



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Acronyms and Abbreviations

ACEC	Areas of Critical Environmental Concern
Applicant	Wagon Trail Energy Center, LLC c/o NextEra Energy Resources, LLC
BMP	Best Management Practice
Council	Energy Facility Siting Council
Facility	Wagon Trail Solar Project
I-84	Interstate 84
OAR	Oregon Administrative Rule
ODEQ	Oregon Department of Environmental Quality
ODOT	Oregon Department of Transportation
TNC	The Nature Conservancy
ZVI	zone of visual influence

1.0 Introduction

Wagon Trail Energy Center, LLC c/o NextEra Energy Resources, LLC (Applicant) proposes to construct and operate the Wagon Trail Solar Project (Facility), a solar energy generation facility and related or supporting facilities in Morrow County, Oregon. This Exhibit L was prepared to meet the submittal requirements in Oregon Administrative Rule (OAR) 345-021-0010(1)(L).

2.0 Analysis Area

The analysis area for protected areas is defined in the Project Order as "the area within and extending 20 miles from the site boundary" (ODOE 2021), as defined in OAR 345-001-0010(59)(e). The site boundary is described in detail in Exhibits B and C. The analysis area is shown on Figure L-1.

3.0 Protected Areas Inventory

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:

(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;*

(B) A map showing the location of the proposed facility in relation to the protected areas;

Table L-1 provides an inventory of the ten protected areas within the analysis area and indicates the proximity and direction of each protected area relative to the Facility site boundary, the basis for protection by reference to applicable subsections of OAR 345-001-0010(26), and the contact information of the land management agency or organization with jurisdiction over each protected area. No protected areas are located within the site boundary. 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) (BLM 2022a, 2022b; DSL 2022; NPS 2022a, 2022b; ODFW 2022a, 2022b; OPRD 2020, 2022a, 2022b; OSU 2015, 2022a, 2022b; USFS 2022; USFWS 2022; USGS 2020). These protected areas are identified by name on Figure L-1.

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

Protected Areas within 20 Miles of Site Boundary			Distance to Site Boundary (miles)		Direction from Facility	Facility Potentially Visible?		Visual Analysis Results	Operational Noise Analysis Results
Type	Area Name	Contact Information	Transmission Line	Solar Array (site boundary)		Transmission Line	Solar Array (site boundary)		
National Parks OAR 345-001-0010(26)(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)	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)	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)	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)	Umatilla National Wildlife Refuge	U.S. Fish and Wildlife Service (USFWS) 72650 Riverview Lane Irrigon, OR 97844 (509) 546-8300 No email listed	19.2	14.0	N	Unlikely	Yes	Negligible impact. Viewshed analysis indicates potential visibility of solar arrays from some refuge locations on the Washington and Oregon sides of the Refuge. At a far background viewing distance of 14 miles or greater, it is highly unlikely that solar arrays with a maximum height of 16 feet could be detected or identified by viewers. If any solar facilities were visible, the additional visual contrast within an existing modified landscape will be negligible. The up to 0.6-mile transmission line is highly unlikely to be visible or otherwise discernible at the far background viewing distance of over 19 miles, and therefore will not contribute to visual contrast from this location. No management direction applicable to preservation of scenic qualities outside of Refuge. Views of the Facility, if any, will not compromise the purpose of the Refuge.	No audible noise
National Fish Hatcheries OAR 345-001-0010(26)(f)	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 Management Areas OAR 345-001-0010(26)(g)	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Wilderness Study Areas OAR 345-001-0010(26)(h)	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Protected Areas within 20 Miles of Site Boundary			Distance to Site Boundary (miles)		Direction from Facility	Facility Potentially Visible?		Visual Analysis Results	Operational Noise Analysis Results
Type	Area Name	Contact Information	Transmission Line	Solar Array (site boundary)		Transmission Line	Solar Array (site boundary)		
Federally Land Management Plan Designated Lands OAR 345-001-0010(26)(i)	Oregon Trail ACEC, Echo Meadows	BLM P.O. Box 2965 Portland, OR 97208 (503) 808-6001 Blm_or_so_land_office_mail@blm.gov	18.6	15.6	NE	Unlikely	No	No impact. Viewshed analysis indicates no visibility of solar facilities at the ACEC location. The up to 0.6-mile transmission line is highly unlikely to be visible or otherwise discernible at the far background viewing distance of over 18 miles, and therefore will not contribute to visual contrast from this location.	No audible noise
	Horn Butte Curlew ACEC	BLM P.O. Box 2965 Portland, OR 97208 (503) 808-6001 Blm_or_so_land_office_mail@blm.gov	19.2	16.3	NW	Unlikely	Yes	Negligible impact. Viewshed analysis indicates limited potential visibility from small portions of the ACEC. If any solar arrays were visible, at a distance of over 16 miles they are unlikely to be detected or identified by viewers. The up to 0.6-mile transmission line is highly unlikely to be visible or otherwise discernible at the far background viewing distance of over 19 miles, and therefore will not contribute to visual contrast from this location. No management direction applicable to preservation of scenic qualities outside of ACEC. The Facility will not compromise the purpose of the ACEC.	No audible noise
	Boardman Research Natural Area (RNA)	BLM P.O. Box 2965 Portland, OR 97208 (503) 808-6001 Blm_or_so_land_office_mail@blm.gov	3.0	2.1	NW	Yes	Yes	Low impact. Viewshed analysis indicates potential relatively close visibility of solar panels in portions of the southern part of the RNA. At a viewing distance of 2.1 miles or greater, the solar arrays will not create a prominent feature in the viewshed. If any solar facilities were visible, the additional visual contrast within an existing modified landscape that includes wind turbines (i.e., the existing adjacent Wheatridge Renewable Energy Facilities I, II, and III) and other infrastructure will be weak. The up to 0.6-mile transmission line may be visible in the middleground from the southern portion of the RNA; however, if visible, the additional visual contrast within an existing modified landscape as noted above will be weak. 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. ¹ No management direction applicable to preservation of scenic qualities outside of the RNA. The Facility will not compromise the purpose of the RNA. The Facility will not compromise the purpose of the RNA.	Audible noise up to 50 decibels

Protected Areas within 20 Miles of Site Boundary			Distance to Site Boundary (miles)		Direction from Facility	Facility Potentially Visible?		Visual Analysis Results	Operational Noise Analysis Results
Type	Area Name	Contact Information	Transmission Line	Solar Array (site boundary)		Transmission Line	Solar Array (site boundary)		
	Boardman Grasslands Managed Area	Threemile Canyon Farms 75906 Threemile Road Boardman, OR 97818 (541) 481-9274 medgecomb@rdoffutt.com	5.8	4.0	NW	Yes	Yes	Low impact. Viewshed analysis indicates potential relatively close visibility of solar panels in portions of the northeastern and western parts of the resource. At a viewing distance of 4.0 miles or greater, the solar arrays will not create a prominent feature in the viewshed. If any solar facilities were visible, the additional visual contrast within an existing modified landscape that includes wind turbines (i.e., the existing adjacent Wheatridge Renewable Energy Facilities I, II, and III) and other infrastructure will be weak. The up to 0.6-mile transmission line may be visible in the background from the northeastern and western portions of the RNA; however, if visible, the additional visual contrast within an existing modified landscape as noted above will be weak. Public access is not permitted within the resource, with occasional visits by TNC staff for monitoring and maintenance. ^{2,3} No management direction applicable to preservation of scenic qualities outside of resource. The Facility will not compromise the purpose of the resource.	No audible noise
State Parks, Waysides, Corridors, Monuments, Historic, or Recreation Areas OAR 345-001-0010(26)(j)	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Willamette River Greenway OAR 345-001-0010(26)(k)	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Protected Areas within 20 Miles of Site Boundary			Distance to Site Boundary (miles)		Direction from Facility	Facility Potentially Visible?		Visual Analysis Results	Operational Noise Analysis Results
Type	Area Name	Contact Information	Transmission Line	Solar Array (site boundary)		Transmission Line	Solar Array (site boundary)		
Oregon Register of Natural Areas Designated Natural Areas OAR 345-001-0010(26)(l)	Lindsay Prairie Preserve	Oregon Register of Natural Areas Designated Natural Areas OAR 345-001-0010(26)(l)	2.2	0.5	W	Yes	Yes	Low impact. Viewshed analysis indicates potential relatively close visibility of solar panels in portions of the eastern part of the preserve. At a viewing distance of 0.5 miles or greater, the solar arrays will not create a prominent feature in the viewshed. If any solar facilities were visible, the additional visual contrast within an existing modified landscape that includes wind turbines (i.e., the existing adjacent Wheatridge Renewable Energy Facilities I, II, and III) and other infrastructure will be weak. The up to 0.6-mile transmission line may be visible in the middleground from the eastern portion of the preserve; however, if visible, the additional visual contrast within an existing modified landscape as noted above will be weak. The Preserve is fenced, gated, and locked and has no developed facilities; although it is publicly accessible, it receives very little public use. ⁴ The site is protected for preservation of native vegetation and wildlife, and there is no management direction related to scenic quality. The Facility will not compromise the purpose of the Preserve.	Audible noise up to 50 decibels
South Slough National Estuarine Research Reserve OAR 345-001-0010(26)(m)	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)	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
State Wildlife Areas and Management Areas OAR 345-001-0010(26)(o)	Columbia Basin-Coyote Springs Wildlife Area	Oregon Department of Fish and Wildlife (ODFW) 73471 Mytinger Lane Pendleton, OR 97801 (541) 276-2344 odfw.info@odfw.oregon.gov	19.0	14.0	N	Unlikely	Yes	Negligible impact. Viewshed analysis indicates limited potential visibility of solar facilities from 14 miles or greater distance from this area. The up to 0.6-mile transmission line is highly unlikely to be visible or otherwise discernible at the far background viewing distance of 19 miles or greater, and therefore will not contribute to visual contrast from this location. No management direction applicable to scenic quality. The potential addition of solar arrays to the distant background will not interfere with wildlife viewing or compromise the purpose of the wildlife area.	No audible noise
	Columbia Basin-Willow Creek Wildlife Area	ODFW 73471 Mytinger Lane Pendleton, OR 97801 (541) 276-2344 odfw.info@odfw.oregon.gov	22.9	18.8	NE	Unlikely	No	No impact. Viewshed analysis indicates no visibility of solar facilities from this area. The up to 0.6-mile transmission line is highly unlikely to be visible or otherwise discernible at the far background viewing distance of over 22 miles, and therefore will not contribute to visual contrast from this location.	No audible noise

Protected Areas within 20 Miles of Site Boundary			Distance to Site Boundary (miles)		Direction from Facility	Facility Potentially Visible?		Visual Analysis Results	Operational Noise Analysis Results
Type	Area Name	Contact Information	Transmission Line	Solar Array (site boundary)		Transmission Line	Solar Array (site boundary)		
	Columbia Basin-Irrigon Wildlife Area	ODFW 73471 Mytinger Lane Pendleton, OR 97801 (541) 276-2344 odfw.info@odfw.oregon.gov	24.3	19.8	N	Unlikely	No	No impact. Viewshed analysis indicates no visibility of solar facilities from this area. The up to 0.6-mile transmission line is highly unlikely to be visible or otherwise discernible at the far background viewing distance of over 24 miles, and therefore will not contribute to visual contrast from this location.	No audible noise
State Fish Hatcheries OAR 345-001-0010(26)(p)	Irrigon Hatchery	ODFW 74135 Riverview Lane Irrigon, OR 97844 (541) 922-5732 odfw.info@odfw.oregon.gov	24.2	19.5	N	Unlikely	Yes	Negligible impact. Viewshed analysis indicates limited potential visibility of solar facilities at the hatchery location. At a viewing distance of 19.5 miles or greater, it is highly unlikely that solar arrays could be detected or identified by viewers. The up to 0.6-mile transmission line is highly unlikely to be visible or otherwise discernible at the far background viewing distance of over 24 miles, and therefore will not contribute to visual contrast from this location. No management direction applicable to scenic quality. The Facility will not compromise the purpose of the hatchery.	No audible noise
Oregon State University (OSU) Designated Agricultural Experiment Stations, Experimental Areas, or Research Centers OAR 345-001-0010(26)(q)	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
OSU Designated Research Forests OAR 345-001-0010(26)(r)	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

1. Information on access and use obtained through a personal communication from Kelly Wallis, TNC, July 18, 2022.
 2. ODFW. 2023c. Boardman Area, COA 154. Accessed August 16, 2023. Available online at: <https://oregonconservationstrategy.org/conservation-opportunity-area/boardman-area/>.
 3. Information on ownership/access obtained through a personal communication between Kristen Gulick, Tetra Tech, and Steve Cherry, ODFW, May 8, 2023.
 4. Information on access and use obtained through a personal communication from Dalles Field Office representative, TNC, January 24, 2022.

4.0 Potential Impacts

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

(i) Noise resulting from facility construction or operation;

Table L-1 provides a summary of operational noise levels from the solar facilities at protected areas within the analysis area. Exhibit Y provides an assessment of the existing acoustical environment and anticipated Facility sound levels; the methodology for noise modeling is discussed in detail in that exhibit. Construction activities associated with the Facility have the potential for localized noise on a temporary basis as construction activities progress through certain locations within the site boundary. Based on sound levels of the anticipated equipment for Facility construction and given that all protected areas except for two are located more than 2 miles from the site boundary, construction noise will not likely be distinguishable from background noise levels at all but one of the protected areas. The two protected areas less than 2 miles from the site boundary, the Lindsay Prairie Preserve and the Boardman RNA, will receive up to 50 decibels, at the loudest, at the eastern borders of the protected areas, i.e., the closest portion to the battery energy storage system; this sound level is approximately equivalent to less than the that of a normal conversation.

There will be no significant operational noise from the solar panels themselves. However, there will be some limited noise from associated facilities, including cooling equipment associated with the battery energy storage system and electrical equipment. Based on sound levels of the anticipated equipment for Facility operation, operational noise will attenuate to be indistinguishable from the background noise level (including existing wind projects; less than 30 decibels) from a distance of approximately 2 miles from the site boundary. All protected areas except for two, the Lindsay Prairie Preserve and Boardman RNA, are located more than 2 miles from the site boundary, where noise from the Facility will be effectively indistinguishable from the background noise level.

Exhibit Y describes sound level thresholds derived from the Oregon Department of Environmental Quality (ODEQ) noise regulations (OAR 340-035-0015 and OAR 340-035-0035), which are used to assess the significance of impacts to noise sensitive properties. As defined in the ODEQ regulations, "Noise sensitive property" is "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." The closest protected areas, the Lindsay Prairie Preserve and the Boardman RNA, are not areas normally used for sleeping (which is also true of all of the other protected areas) and have minimal daytime use, so are not considered noise sensitive property. Therefore, the ODEQ noise regulations do not apply.

The Lindsay Prairie Preserve is a site protected for restoration and preservation of native vegetation and wildlife, and while open to the public, receives no known public use (see Section 4.4.1 below). The protected area is fenced, and the access road is gated and locked. Similarly, the Boardman RNA is inaccessible to the public (restricted by federal and private ownership) and is managed as a natural area (personal communication between Kristen Gulick, Tetra Tech, and Kelly Wallis, TNC, July 18, 2022; personal communication between Kristen Gulick, Tetra Tech, and Steve Cherry, ODFW, May 8, 2023; ODFW 2023; see Section 4.4.2 below). Therefore, although Facility construction and operations will be audible, the Facility is not anticipated to interfere with the primary purposes of the Lindsay Prairie Preserve or Boardman RNA. Thus, because of the low elevation of noise-emitting components of the Facility infrastructure and because of their distance from the Lindsay Prairie Preserve, Boardman RNA, and the other protected areas, construction and operation of the solar arrays will not have a significant noise impact.

4.2 Traffic Impacts

(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 could be implemented by the Applicant and the construction contractor to avoid significant traffic impacts; and required coordination with Oregon Department of Transportation (ODOT) and county road officials for necessary road improvements, road closures, and permits for construction and oversized load movements.

No significant traffic impacts to protected areas are anticipated from construction of the Facility. Four of the protected areas are located north of Interstate 84 (I-84) and will be virtually unaffected by Facility traffic, which will be concentrated on a small number of roads south of I-84. No truck traffic associated with the Facility will occur north of I-84, and construction worker traffic will 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 Lindsay Prairie Preserve, Boardman Research Natural Area (RNA), and the Boardman Grasslands Managed Area are likely to experience impacts from Facility traffic; the Horn Butte Curlew Area of Critical Environmental Concern (ACEC), Willow Creek Wildlife Area, and the Oregon Trail ACEC are accessed by routes that will not carry Facility-related truck traffic. Construction worker traffic may occur on roads providing access to these areas; however, construction worker traffic will be dispersed on many roads in the area, and the level of worker traffic anticipated will not adversely affect level of service on those roads (see Exhibit U).

The Lindsay Prairie Preserve receives no known public use, and public access is prohibited in the Boardman RNA and Boardman Grasslands Managed Area; therefore, significant traffic impacts are inherently not likely to occur. Regardless, construction traffic will be temporary and, as stated above, dispersed over many roads. Construction traffic will primarily be dispersed throughout the

business work week concentrated during commute hours, whereas peak recreational traffic is greatest during the weekend. Therefore, there will be no major traffic impacts to protected areas.

Traffic analysis identified no significant impacts on protected areas from the Wheatridge Renewable Energy Facilities I, II, III (Wheatridge Facilities), which has a partially overlapping site boundary, prior to construction. The Wheatridge Facilities had more construction traffic than the Facility, including slow-moving trucks, on the same roadways. During construction of the Wheatridge Facilities, no complaints regarding traffic impacts to protected areas were received by the Applicant. The Applicant plans to construct the Facility in phases and will develop a Construction Traffic Management Plan as part of the Road Use Agreement coordinated with the Morrow County Road Department and ODOT in consideration of impacts to the local road network. For all of the previously noted reasons, no significant adverse traffic impacts to protected areas are anticipated from construction of the Facility.

Facility operations will not generate amounts of traffic that could adversely impact protected areas. Operation of the Facility is expected to employ up to three individuals (see Exhibit U). Therefore, there will be no significant impacts to protected areas due to operations traffic.

4.3 Water Use and Wastewater

(iii) Water use during facility construction or operation;

No ground or surface water withdrawals will take place in a protected area or beyond those already permitted for existing water suppliers during construction (see Exhibit O). During operation, the Facility will have minimal water needs that are anticipated to will be fulfilled through the use of exempt wells at the operations and maintenance building or another licensed water source. Therefore, water used during construction and operation will not impact water availability or use at protected areas. Water use for Facility construction and operation is discussed further in Exhibit O.

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

Wastewater, in this context, refers to stormwater runoff and to sanitation wastewater; no industrial wastewater will be produced during construction or operation of the Facility. No stormwater runoff will leave the site boundary (see Exhibit I), and no sanitation wastewater will be discharged in or near a protected area (see Exhibits O and V). Stormwater runoff will be managed on site according to the Best Management Practices (BMPs) as described in the National Pollutant Discharge Elimination System 1200-C and the associated Erosion and Sediment Control Plan (Attachment I-1). 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 operations and maintenance building during Facility operations will be handled by an on-site septic system, to be permitted prior to construction. Therefore, no protected areas will be affected by wastewater from the Facility.

4.4 Visual Impacts

(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 Facility will not generate any emissions plumes, so it will not cause any visual impacts from air emissions. Potential visual impacts due to dust created during construction will be largely prevented by following BMPs for dust control as detailed in Exhibit I and Exhibit O. Visual impacts of the Facility are primarily related to potential views of the solar panels.

To the extent possible, reflectivity of the solar arrays will be minimized. Antireflective coating will be used to reduce glare, and the surface of the panels will have high transmittance to increase the amount of light reaching the photovoltaic cells. With these methods, the panels will be less reflective than a natural water body or a coated glass surface that is not antireflective.

In evaluating the visual impacts, the Applicant first determined whether the solar arrays will 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 Esri ArcGIS software to identify the areas from which the proposed solar panels might be visible.

It should be noted that this “bare-earth” modeling approach, based only on the effects of terrain on visibility, results in a conservative assessment of potential visibility for several reasons. The model does not account for distance, lighting, weather, and atmospheric attenuation factors that diminish visibility under actual field conditions. A bare-earth analysis also does not account for the effects of vegetation or buildings, which will in practice block or screen views in some places. Figure L-2 shows the areas from which the solar arrays will potentially be visible based on the ZVI analysis.

The ZVI analysis indicated proposed solar arrays will not be visible from three of the ten protected areas within the analysis area. Therefore, the solar facilities will clearly have no impact on these three protected areas. The results of the ZVI analysis indicate there will be potential visibility of some portions of the solar arrays from six of the ten protected areas within the analysis area (see Table L-1), based on the existence of a direct line of sight from some portion of the solar facilities to one or more locations within a protected area. The nearest protected areas to the solar arrays are the Lindsay Prairie Preserve, Boardman RNA, and Boardman Grasslands Managed Area, located 0.5, 2.1, and 4.0 miles away, respectively, at the nearest points (see Table L-1). The ZVI analysis indicated that solar arrays will potentially be visible from portions of these protected areas. The analysis also indicated potential visibility of solar facilities from portions of the Umatilla National Wildlife Refuge, Irrigon Fish Hatchery, Horn Butte Curlew ACEC, and Columbia Basin – Coyote Springs Wildlife Area, for which the respective viewing distances range from 14 miles to 19.5 miles at the closest point. The impact analysis concluded there will be negligible visual impacts to these four areas; although the ZVI analysis indicated potential visibility from these protected areas (i.e., a direct line of sight), viewers will be highly unlikely to detect or identify the low-profile solar arrays at such long distances.

Potential visibility is but one of several factors that comprise an assessment of visual impact to a protected area. Other factors to consider include the viewing distance; other natural and human-made features visible within the view; the likely number and nature of visitors to a protected area; and whether there is any management direction related to preservation of scenic quality, either within the protected area or outside of it. Table L-1 provides a summary of the visual impact assessment for each of the ten protected areas. The table includes consideration of the visibility of the up to 0.6-mile associated transmission line for the Facility. Given its short length and location of 18.6 to over 24 miles from seven of the ten protected areas, it was considered highly unlikely to be visible from those seven areas and a separate ZVI was unwarranted. From the Lindsay Prairie Preserve, Boardman RNA, and Boardman Grasslands Managed Area, the analysis conservatively assumes potential visibility of the associated transmission line, discussed below.

The three protected areas closest to the Facility, the Lindsay Prairie Preserve, Boardman RNA, and Boardman Grasslands Managed Area, will have potential foreground and middle ground views of the Facility. The following sections provides a visual impact assessment specific to these protected areas.

4.4.1 Lindsay Prairie Preserve

At the Lindsay Prairie Preserve, the visual impact of the Facility is considered to be low. The visibility analysis indicates potential visibility of the solar arrays at a distance of 0.5 mile or greater in portions of the Preserve, primarily within the eastern half. Because the solar arrays will have a maximum height of 16 feet, they will not appear as a prominent feature to viewers at this distance. If they were visible, the arrays would appear as a dark line on the horizon and would create minimal visual contrast, which would be seen in context with existing landscape modifications, including existing wind turbines (i.e., the adjacent Wheatridge Facilities) and other electrical infrastructure. The Facility's associated 0.6-mile transmission line may also be visible at a distance of 2.2 miles or greater from portions of the Preserve, primarily in the eastern half. If visible, the transmission line would introduce vertical structures that would create minimal visual contrast in context with substantially taller existing wind turbines as well as other existing similar electrical infrastructure in the viewshed.

The Preserve is fenced, the access gated and locked, and there are no signs, trails, or facilities 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 (personal communication between Kristen Gulick, Tetra Tech, and Kelly Wallis, TNC, January 27, 2021). Views of the Facility will not compromise the purpose of the Preserve, and will affect few users for a short duration. Additionally, the site is not managed for its scenic qualities. Therefore, the Facility will not have a significant adverse visual impact on this protected area.

4.4.2 Boardman Research Natural Area

At the Boardman RNA, the visual impact of the Facility is considered to be low. The visibility analysis indicates potential visibility of the solar arrays at a distance of 2.1 miles or greater in portions of the RNA, primarily within the southern half. Because the solar arrays will have a maximum height of 15 feet, they will not appear as a prominent feature to viewers at this distance. If they are visible, the arrays would appear as a dark line on the horizon and would create minimal visual contrast, which would be seen in context with existing landscape modifications, including existing wind turbines (i.e., the adjacent Wheatridge Facilities), powerlines, and agricultural irrigation equipment. The Facility's associated 0.6-mile transmission line may also be visible at a distance of 3.0 miles or greater from portions of the RNA, primarily in the southern half. If visible, the transmission line would introduce vertical structures that would create minimal visual contrast in context with substantially taller existing wind turbines as well as other existing similar electrical infrastructure in the viewshed.

The Boardman RNA is located within the Boardman Bombing Range and thus is not accessible to the public, with occasional visits by TNC staff for monitoring and maintenance (personal communication between Kristen Gulick, Tetra Tech, and Kelly Wallis, TNC, July 18, 2022). Views of the Facility will not compromise the purpose of the RNA, and will affect few users for a short duration. Additionally, the site is not managed for its scenic qualities. Therefore, the Facility will not have a significant adverse visual impact on this protected area.

4.4.3 Boardman Grasslands Managed Area

At the Boardman Grasslands Managed Area, the visual impact of the Facility is considered to be low. The visibility analysis indicates potential visibility of the solar arrays at a distance of 4.0 miles or greater in portions of the resource, primarily within the northeastern and western sections. Because the solar arrays will have a maximum height of 15 feet, they will not appear as a prominent feature to viewers at this distance. If they are visible, the arrays would appear as a dark line on the horizon and would create minimal visual contrast, which would be seen in context with existing landscape modifications, including existing wind turbines (i.e., the adjacent Wheatridge Facilities), powerlines, and agricultural irrigation equipment. The Facility's associated 0.6-mile transmission line may also be visible at a distance of 5.8 miles or greater from portions of the resource, primarily in the northeastern and western sections. If visible, the transmission line would introduce vertical structures that would create minimal visual contrast in context with substantially taller existing wind turbines as well as other existing similar electrical infrastructure in the viewshed.

Public access is not permitted within the Boardman Grasslands Managed Area for it is privately owned by Threemile Canyon Farms (personal communication between Kristen Gulick, Tetra Tech, and Steve Cherry, ODFW, May 8, 2023; ODFW 2023c; see Attachment L-1). Thus, views of the Facility will not compromise the purpose of the resource and will essentially affect no users. Additionally, the site is not managed for its scenic qualities. Therefore, the Facility will not have a significant adverse visual impact on this protected area.

4.5 Other Impacts

No other impacts to protected areas are anticipated.

5.0 Conclusions

The analysis area contains all or part of ten protected areas. The Applicant analyzed potential impacts to these areas and concluded as follows:

- **Noise.** Due to the distance between the protected areas and the Facility (at least 2 miles except for the Lindsay Prairie Preserve and Boardman RNA), operational and construction noise will not likely be audible or distinguishable from existing background noise at eight of the ten protected areas. Audible noise equivalent or less than the sound level of a normal conversation (up to 50 decibels) may be heard from the eastern portions of the Lindsay Prairie Preserve and Boardman RNA. However, the protected areas are not considered to be noise sensitive properties; thus, significant impacts are not anticipated. Noise modeling presented in Exhibit Y further supports these findings.
- **Traffic.** Facility-related traffic volumes will not be sufficiently high or located so as to significantly impact most protected areas. Construction traffic could cause some short-term, intermittent delays and increased congestion along roads used to access one of the protected areas; however, these will be temporary and traffic conditions will return to typical low levels following construction. There were no identified traffic impacts on protected areas from the Wheatridge Facilities (which has a partially overlapping site boundary), which would have had more construction traffic, including slow-moving trucks, on the same roadways. With implementation of avoidance and minimization measures, as well as development of a Construction Traffic Management Plan as part of the Road Use Agreement in consultation with the appropriate agencies, there will be no significant adverse traffic impacts to protected areas resulting from the construction or operation of the Facility.
- **Water.** The Facility will not use water sourced from a protected area. Therefore, there will be no significant impacts to protected areas by water use at the Facility.
- **Wastewater.** The Facility will not discharge wastewater to a protected area. Therefore, there will be no significant impacts to protected areas due to wastewater generated at the Facility.
- **Visual.** The Facility will be potentially visible from six of the ten protected areas in the analysis area. 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 Facility will not have a significant visual impact on any protected area.

6.0 Submittal Requirements and Approval Standards

6.1 Submittal Requirements

Table L-2. Submittal Requirements Matrix

Requirement	Location
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:	-
(A) A list of all protected areas within the analysis area, identifying:	Section 3.0
(i) The distance and direction of the protected area from the proposed facility;	Section 3.0
(ii) The basis for protection, by reference to a specific subsection of OAR 345-001-0010(26); and	Section 3.0
(iii) The name, mailing address, phone number, and email address of the land management agency or organization with jurisdiction over the protected area;	Section 3.0
(B) A map showing the location of the proposed facility in relation to the protected areas; and	Figure L-1
(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:	Table L-1, Section 4.0, and Section 5.0
(i) Noise resulting from facility construction or operation;	Table L-1 and Section 4.1
(ii) Increased traffic resulting from facility construction or operation;	Section 4.2
(iii) Water use during facility construction or operation;	Section 4.3
(iv) Wastewater disposal resulting from facility construction or operation;	Section 4.3
(v) Visual impacts of facility structures or plumes, including, but not limited to, changes in landscape character or quality; and	Table L-1, Figure L-2, and Section 4.4
(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.	Section 4.4

6.2 Approval Standards

Table L-3. Approval Standard

Requirement	Location
OAR 345-022-0040 Protected Areas	
(1) To issue a site certificate, the Council must find:	-
(a) The proposed facility will not be located within the boundaries of a protected area designated on or before the date the application for site certificate or request for amendment was determined to be complete under OAR 345-015-0190 or 345-027-0363;	Sections 3.0 through 5.0

Requirement	Location
(b) The design, construction and operation of the facility, taking into account mitigation, are not likely to result in significant adverse impact to a protected area designated on or before the date the application for site certificate or request for amendment was determined to be complete under OAR 345-015-0190 or 345-027-0363.	Sections 3.0 through 5.0
(2) Notwithstanding section (1), the Council may issue a site certificate for:	N/A
(a) A facility that includes a transmission line, natural gas pipeline, or water pipeline located in a protected area, if the Council determines that other reasonable alternative routes or sites have been studied and that the proposed route or site is likely to result in fewer adverse impacts to resources or interests protected by Council standards; or	N/A
(b) Surface facilities related to an underground gas storage reservoir that have pipelines and injection, withdrawal or monitoring wells and individual wellhead equipment and pumps located in a protected area, if the Council determines that other alternative routes or sites have been studied and are unsuitable.	N/A
(3) The provisions of section (1) do not apply to:	N/A
(a) A transmission line routed within 500 feet of an existing utility right-of-way containing at least one transmission line with a voltage rating of 115 kilovolts or higher; or	N/A
(b) A natural gas pipeline routed within 500 feet of an existing utility right of way containing at least one natural gas pipeline of 8 inches or greater diameter that is operated at a pressure of 125 psig.	N/A
(4) The Council shall apply the version of this rule adopted under Administrative Order EFSC 1-2007, filed and effective May 15, 2007, to the review of any Application for Site Certificate or Request for Amendment that was determined to be complete under OAR 345-015-0190 or 345-027-0363 before the effective date of this rule. Nothing in this section waives the obligations of the certificate holder and Council to abide by local ordinances, state law, and other rules of the Council for the construction and operation of energy facilities in effect on the date the site certificate or amended site certificate is executed.	N/A

7.0 References

BLM (U.S. Bureau of Land Management). 2022a. BLM National Data. Available online at:

<https://blm-egis.maps.arcgis.com/apps/webappviewer/index.html?id=6f0da4c7931440a8a80bfe20edd7550>

BLM. 2022b. Areas of Critical Environmental Concern. Available online at:

<https://www.blm.gov/programs/planning-and-nepa/planning-101/special-planning-designations/acec>

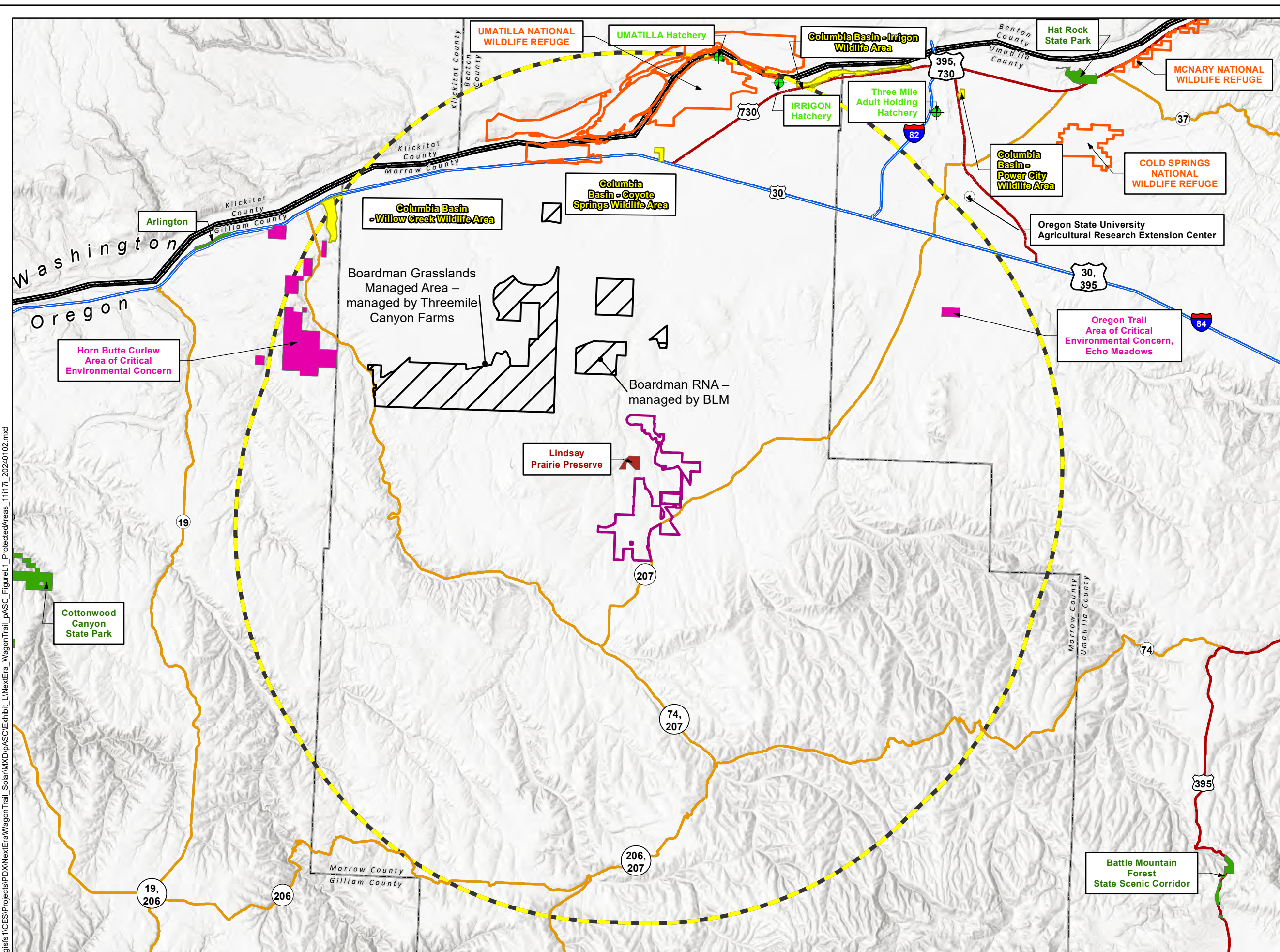
DSL (Oregon Department of State Lands). 2022. About South Slough Reserve. Available online at:

<https://www.oregon.gov/dsl/ss/pages/about.aspx>

- NPS (U.S. National Park Service). 2022a. Find A Park/Oregon. Available online at: <https://www.nps.gov/state/or/index.htm>
- NPS. 2022b. Wild and Scenic Rivers. Available online at: <https://nps.maps.arcgis.com/apps/View/index.html?appid=ff42a57d0aae43c49a88dae0e353142>
- ODOE (Oregon Department of Energy). 2021. Wagon Trail Solar Project. First Amended Project Order. Issued August 17, 2021. Salem, OR. Available online at: <https://www.oregon.gov/energy/facilities-safety/facilities/Facilities%20library/2021-08-17-WTS-APP-NOI-Amended-Project-Order.pdf>
- ODFW (Oregon Department of Fish and Wildlife). 2023. Boardman Area, COA 154. Available online at: <https://oregonconservationstrategy.org/conservation-opportunity-area/boardman-area/> (Accessed June 26, 2023).
- ODFW. 2022a. Visit ODFW Hatcheries. Available online at: <https://myodfw.com/visit-odfw-hatcheries>.
- ODFW. 2022b. Visit ODFW Wildlife Areas. Available online at: <https://myodfw.com/visit-odfw-wildlife-areas>.
- OPRD (Oregon Parks and Recreation Department). OPRD. 2022a. Park Status. Available online at: <https://stateparks.oregon.gov/index.cfm?do=visit.status>.
- OPRD. 2022b. Oregon State Scenic Waterway and Water Courses. Available online at: <https://www.oregon.gov/oprd/bwt/pages/ssw-list.aspx> and https://www.arcgis.com/home/webmap/viewer.html?url=https%3A%2F%2Fmaps.prd.state.or.us%2Farcgis%2Frest%2Fservices%2FAdmin_boundaries%2FAD_SCENIC_WATERWAYS%2FFeatureServer%2F0&source=sd.
- OPRD. 2020. Oregon Natural Areas Plan. Available online at: https://inr.oregonstate.edu/sites/inr.oregonstate.edu/files/2020_nap_draft.pdf.
- OSU (Oregon State University). OSU. 2022a. OAES Branch Stations. Available online at: <https://agsci.oregonstate.edu/research/college-administration/oaes-branch-stations>.
- OSU. 2022b. Welcome to the OSU Research Forests. Available online at: <https://cf.forestry.oregonstate.edu/>.
- OSU. 2015. Register of Natural Heritage Resources. Available online at: <https://inr.oregonstate.edu/orbic/natural-areas-program/register-natural-heritage-resources>.
- USFS (U.S. Forest Service). 2022. Wildernesses in the Pacific Northwest. Available online at: <https://www.fs.usda.gov/detail/r6/specialplaces/?cid=stelprdb5227694>.
- USFWS (U.S. Fish and Wildlife Service). 2022. Find an FWS Facility Near You. Available online at: https://www.fws.gov/visit-us?state_name=%5B%22Oregon%22%5D.

USGS (U.S. Geological Survey). 2020. Gap Analysis Project (GAP), 2020, Protected Areas Database of the United States (PADUS) 2.1: U.S. Geological Survey. Available online at: <https://maps.usgs.gov/padus/>.

Figures



Wagon Trail Solar Project

Figure L-1
Protected Areas within
the Analysis Area

MORROW COUNTY, OREGON

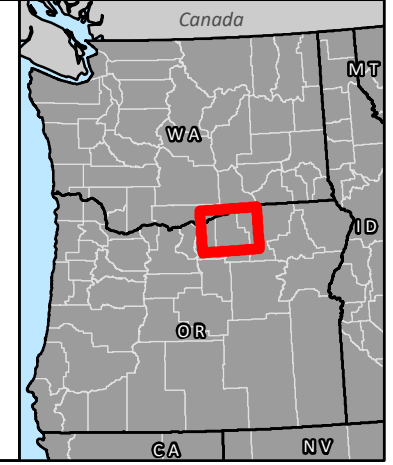
- Site Boundary
- Analysis Area (20-mile Buffer)
- Research Center (OSU)
- Fish Hatchery
- US Fish and Wildlife Service Refuge (USFWS)
- Oregon Department of Fish and Wildlife Wildlife Refuge (ODFW)
- Areas of Critical Environmental Concern (BLM)
- Oregon Parks and Recreation Department Site (OPRD)
- BLM Research Natural Areas
- Natural Areas (TNC)
- County Boundary
- State Boundary
- Interstate Highway
- US Highway
- State Highway



Data Sources

NextEra-Project Infrastructure;
USDA-Aerial Imagery;
ESRI-County Boundaries

Reference Map



1:325,000 WGS 1984 UTM Zone 11N

0 1 2 4 6 8 Miles

NOT FOR CONSTRUCTION

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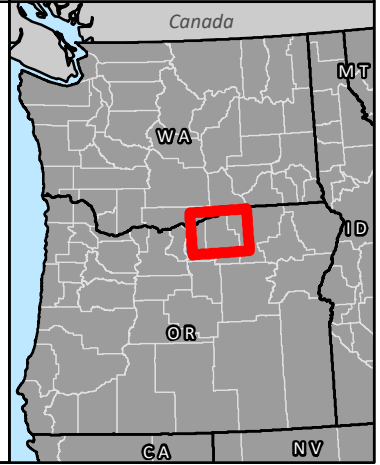
Wagon Trail Solar Project

Figure L-2
Zone of Visual Influence

MORROW COUNTY, OREGON

-  Site Boundary
-  Analysis Area (20-mile Buffer)
-  Solar Array Not Visible
-  Solar Array Potentially Visible
-  Research Center (OSU)
-  Fish Hatchery
-  US Fish and Wildlife Service Refuge (USFWS)
-  Oregon Department of Fish and Wildlife Wildlife Refuge (ODFW)
-  Areas of Critical Environmental Concern (BLM)
-  Oregon Parks and Recreation Department Site (OPRD)
-  BLM Research Natural Areas
-  Natural Areas (TNC)
-  County Boundary
-  State Boundary
-  Interstate Highway
-  US Highway
-  State Highway



Data Sources	Reference Map
NextEra-Project Infrastructure; USDA-Aerial Imagery; ESRI-County Boundaries	

Potential solar array visibility calculated using a 10 meter bare-earth digital elevation model with a solar fence line height of 16 feet (4.8 meters) and a viewing height of 6 feet (1.8 meters).

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