Exhibit L

Protected Areas

Sunstone Solar Project
June 2024

Prepared for

Sunstone Solar, LLC

Prepared by

Tetra Tech, Inc.

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Acronyms and Abbreviations

ACEC	Areas of Critical Environmental Concern
Applicant	Sunstone Solar, LLC, a subsidiary of Pine Gate Renewables, LLC
BMP	best management practice
dB	decibel
Facility	Sunstone Solar Project
kV	kilovolt
NPDES	National Pollutant Discharge Elimination System
OAR	Oregon Administrative Rule
ODOT	Oregon Department of Transportation
RNA	Research Natural Area
SNHA	State Natural Heritage Area
TNC	The Nature Conservancy
ZVI	zone of visual influence

1.0 Introduction

Sunstone Solar, LLC, a subsidiary of Pine Gate Renewables, LLC (Applicant), proposes to construct and operate the Sunstone Solar Project (Facility), a photovoltaic 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

In accordance with OAR 345-001-0010(35)(e) (and as defined in the Project Order [ODOE 2022]), the analysis area for protected areas is the area within and extending 12 miles from the site boundary (Figure L-1; ODOE 2022). The site boundary is defined in detail in Exhibits B and C and 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; and

Table L-1 provides an inventory of the three 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 12 Miles of Site Boundary			Distance to Site Boundary (miles)		Direction from Facility	Facility Potentially Visible?		Visual Analysis Results	Operational Noise Analysis Results
Type	Contact Information	Area Name	Transmission Line	Solar Array		Transmission Line	Solar Array		
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
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
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
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
National Wildlife Refuges OAR 345-001-0010(26)(e)	N/A	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A
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
National Recreation Areas, Scenic Areas, or Special Resources Management Areas OAR 345-001-0010(26)(g)	N/A	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A
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
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	Oregon Trail Area of Critical Environmental Concern (ACEC), Echo Meadows Interpretive Site	13.5	11.5	NE	No	No	No impact. Viewshed analysis indicates no visibility of solar facilities or transmission lines at the ACEC location. This site receives low levels of public use, up to a maximum of about 1,200 visitors per year.[1] No management direction applicable to preservation of scenic qualities outside of the ACEC. The Facility will not compromise the purpose of the ACEC.	No audible noise

Protected Areas within 12 Miles of Site Boundary			Distance to Site Boundary (miles)		Direction from Facility	Facility Potentially Visible?		Visual Analysis Results	Operational Noise Analysis Results
Type	Contact Information	Area Name	Transmission Line	Solar Array		Transmission Line	Solar Array		
	BLM P.O. Box 2965 Portland, OR 97208 (503) 808-6001 Blm_or_so_land_office_mail@blm.gov	Boardman Research Natural Area (RNA)	4.0	4.0	NW	Yes	Yes	Low impact. Viewshed analysis indicates potential, relatively close visibility of solar panels in portions of the southeastern part of the RNA. At a middleground viewing distance of 4.0 mile 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, powerlines, and agricultural irrigation equipment will be weak. The transmission lines may be visible in the middleground from the southeastern portion of the RNA (4.0 miles); 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.[2] No management direction applicable to preservation of scenic qualities outside of the RNA. The Facility will not compromise the purpose of the RNA.	No audible noise
State Parks, Waysides, Corridors, Monuments, Historic, or Recreation Areas OAR 345-001-0010(26)(j)	N/A	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A
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

Protected Areas within 12 Miles of Site Boundary			Distance to Site Boundary (miles)		Direction from Facility	Facility Potentially Visible?		Visual Analysis Results	Operational Noise Analysis Results
Type	Contact Information	Area Name	Transmission Line	Solar Array		Transmission Line	Solar Array		
Oregon Register of Natural Areas Designated Natural Areas OAR 345-001-0010(26)(l)	The Nature Conservancy (TNC) 821 SE 14th Avenue Portland, OR 97214 (503) 802-8100 oregon@tnc.org	Lindsay Prairie Preserve/State Natural Heritage Area (SNHA)	2.4	1.3	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 middleground viewing distance of 1.3 mile 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, powerlines, and agricultural irrigation equipment will be weak. The transmission lines may be visible in the middleground from the eastern portion of the Preserve (2.4 miles); 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.[3] The site is protected for preservation of native vegetation and wildlife, and there is no management direction applicable to preservation of scenic qualities outside of the Preserve. The Facility will not compromise the purpose of the Preserve.	No audible noise
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
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
State Wildlife Areas and Management Areas OAR 345-001-0010(26)(o)	N/A	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A
State Fish Hatcheries OAR 345-001-0010(26)(p)	N/A	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Protected Areas within 12 Miles of Site Boundary			Distance to Site Boundary (miles)		Direction from Facility	Facility Potentially Visible?		Visual Analysis Results	Operational Noise Analysis Results
Type	Contact Information	Area Name	Transmission Line	Solar Array		Transmission Line	Solar Array		
Oregon State University (OSU) Designated Agricultural Experiment Stations, Experimental Areas, or Research Centers OAR 345-001-0010(26)(q)	N/A	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A
OSU 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

1. Information on access and use obtained through a personal communication from Brian Woolf, BLM Vale District, Baker Office, July 13, 2022.
2. Information on access and use obtained through a personal communication from Kelly Wallis, TNC, July 18, 2022.
3. 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;

Noise would be generated during both construction and operation of the Facility. 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. Exhibit Y describes sound level thresholds derived from the Oregon Department of Environmental Quality 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." None of the protected areas within the analysis area are considered a noise sensitive property.

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. Noise could result from the use of heavy machinery, such as heavy trucks, bulldozers, graders, and cranes. Based on sound levels of the anticipated equipment for Facility construction, construction noise will attenuate to be indistinguishable from the background/ambient noise levels (including existing wind projects; less than 38 decibels) from a distance of approximately 10.2 miles from the site boundary. Two protected areas are within 10.2 miles of the site boundary (the Lindsay Prairie Preserve and Boardman Research Natural Area [RNA]) and are projected to receive up to 56 decibels (significantly less than 56 decibels at the Boardman RNA due to increased distance from the site boundary), at the loudest, at the eastern borders of the protected areas, i.e., the closest portion to the substations and battery energy storage system; this sound level is approximately equivalent to less than that of a normal conversation. Additionally, pursuant to OAR 340-035-0035(5), noise from construction activities is exempt from the state Noise Standards.

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/ambient noise levels (including existing wind projects; less than 38 decibels) starting from outside the site boundary. All protected areas are located outside of the site boundary, where noise from the Facility will be effectively indistinguishable from both daytime and nighttime projected background/ambient sound levels. Table L-1 provides a summary of operational noise levels from the solar facilities at protected areas within the analysis area.

The Lindsay Prairie Preserve/State Natural Heritage Area (SNHA) 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 4.4.2.1 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; see Section 4.4.2.2 below). Special status species known or likely to occur in the Lindsay Prairie Preserve and Boardman RNA include Washington ground squirrels (*Urocitellus washingtoni*); golden eagles (*Aquila chrysaetos*), burrowing owls (*Athene cunicularia*), and other raptors; long-billed curlews (*Numenius americanus*); bull trout (*Salvelinus confluentus*) and Chinook salmon (*Oncorhynchus tshawytscha*); and California mountain kingsnakes (*Lampropeltis zonata*), northern sagebrush lizards (*Sceloporus graciosus graciosus*), and western painted turtles (*Chrysemys picta*; Mayfield and Kjelmyr 1984, TNC 2023).

Research has demonstrated varying short-term reactions of wildlife to noise. Most research has focused on wildlife reaction to more constant noise generated by roads and high-volume traffic (e.g., Forman and Alexander 1998). Some research has recorded wildlife reaction to airplanes, sonic booms, helicopters, artillery, and blasting that could produce similar reactions from noises associated with Facility construction activities. Golden et al. (1980) provides the following behavioral and physiological reactions of animals to known noise levels ranging between 75 and 105 decibels (dB) from various disturbances, including aircraft:

- Ungulates become nervous and/or run (82 to 95 dB) or panic (95 to 105 dB);
- Waterfowl flock (80 to 85 dB), move and/or become nervous (85 to 95 dB), or startle (95 to 105 dB); and
- Birds scare (85 dB).

The U.S. Department of Transportation (2004) has summarized numerous studies and literature that have reported the effects of noise on wildlife, specifically focusing on noise associated with roads (typically 70 to 80 dB at 50 feet [FHWA 2003]). Overall, existing information suggests that fish are unlikely to be adversely affected at this noise level; reptiles and amphibians show some barrier effect due to roads (but no clear evidence of a noise effect alone); bird numbers and breeding can be strongly affected by the proximity of roads; large mammals can be repelled by road/vehicle noise; and small mammals do not appear to be adversely affected.

As described above, construction noise levels of up to 56 dB are expected to occur at the eastern boundary of the Lindsay Prairie Preserve, with diminishing but above ambient sounds levels anticipated at the Boardman RNA; the greatest sounds level expected at the Lindsay Prairie Preserve are approximately equivalent to less than that of a normal conversation. Therefore, effects on wildlife because of construction noise are expected to be minor. Noise would be of temporary duration (i.e., 1 to 2 years per phase for up to six sequential and/or overlapping phases) and spatially localized, with diminishing sound levels due to sound attenuation as construction phasing moves east.

An assessment of noise impacts from the nearby Boardman Bombing Range found that lands to the west (conservation lands and agricultural lands) and east (agricultural lands) have community day-night levels between 60 and 70 dBA as a result of military training activities (FAA 2016). Jet flyovers associated with the Boardman Bombing Range are reported to reach 90 to 115 dBA (FAA 2016), and frequently occur in the vicinity of the Facility and the Lindsay Prairie Preserve and Boardman RNA. Therefore, wildlife species inhabiting these protected areas are expected to be habituated to increased noise levels to some degree. Overall, noise from construction may have a minor effect on wildlife, but these effects, if any, would be of temporary duration and spatially localized. As a result, 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 (if applicable), road closures, and permits for construction and oversized load movements.

The three protected areas are likely to experience impacts from Facility construction traffic (i.e., trucks and commuter traffic) because they are accessed by roads that would also carry Facility construction traffic (Bombing Range Road and Oregon Route 207 [OR-207]). The three protected areas 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. The Boardman Bombing Range and Lindsay Prairie Preserve/SNHA, specifically, are not readily accessible to the public (e.g., restricted by federal and private ownership), and thus traffic impacts are not anticipated. Note that construction traffic will primarily be dispersed throughout the business work week concentrated during commute hours, whereas peak recreational traffic is greatest during the weekend. Additionally, no roads providing access to protected areas are expected to be closed during construction or operation of the Facility.

Although there will be no significant traffic impacts, given the potential minor temporary impact of construction traffic on visitors to important protected areas, the Applicant plans to construct the Facility in phases and will develop a Construction Traffic Management Plan as part of the Road Use Agreement in consultation with the Morrow County Road Department. Note that no significant traffic impacts on protected areas were identified during construction of the nearby Wheatridge Renewable Energy Facilities (including wind turbine infrastructure), which had similar construction traffic to the Facility, including slow-moving trucks, on the same roadways. Therefore,

no significant adverse traffic impacts to protected areas are anticipated from construction of the Facility.

The operational phase of the Facility will affect protected areas only to the extent that operation and maintenance activities generate significant amounts of traffic. Typical operational traffic will be minimal, as the Facility will permanently employ only approximately 10 permanent on-site employees (including vegetation maintenance, panel and electrical maintenance, and all other related activities). Workers are assumed to reside in the Boardman, Hermiston/Stanfield, or Lexington/Ione areas, with approximately three workers coming from each of these areas. Occasional delivery trucks may also access the site to deliver routine office supplies to the operations and maintenance buildings. Therefore, during operations, an average of approximately 10 round-trip commuter trips per day will occur on weekdays (Monday-Friday). Larger amounts of traffic may be generated only if Facility components need significant repairs or replacement. In that event, some roads will 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 will be rare, intermittent, and temporary, and will not represent significant adverse impacts to any protected area in the vicinity.

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 be fulfilled through the use of exempt wells at the operations and maintenance buildings 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 generated by the Facility will include construction wastewater consisting of sanitary wastewater, equipment washwater and concrete washout water, operational wastewater produced at the O&M buildings and from washing solar panels, and site stormwater runoff (see Exhibits I, O, and W).

Sanitation during construction activities will be addressed through the provision of portable toilets, including the use of holding tanks for biological waste that conform to OAR 340-071 and transportation of waste in accordance with Oregon Revised Statutes 466.005. Small amounts of wastewater will be generated from washdown of concrete trucks after concrete loads have been emptied. Concrete truck chutes will be washed down at each foundation site to prevent the concrete from hardening within the chutes. Washdown methods will be determined by the contractor and may occur at contractor-owned batch plants or a designated concrete washout, and will meet the concrete washout requirements in Section 2.2.14 of the Oregon Department of Environmental Quality National Pollutant Discharge Elimination System (NPDES) 1200-C

Construction Stormwater Discharge General permit. No water used for construction will be discharged into wetlands, streams, or other waterways.

Operational wastewater sources will include on-site septic systems within the O&M buildings that will be licensed, constructed, and maintained in compliance with state permit requirements and will have a discharge capacity of less than 2,500 gallons per day. Operation wastewater will also include maintenance activities associated with the solar array and potential periodic washing of the solar modules to minimize the effects of dust and dirt on energy production which will be dependent on weather conditions (e.g., during drought conditions when there is more dust the panels may require washing). The water used for array cleaning is not anticipated to require off-site disposal due to the extremely high evaporation rate and expected infiltration at the site. Any washwater will likely evaporate before it could be collected for transport off-site. Therefore, washwater will be evaporated or infiltrated into the ground. The Applicant will ensure that there is no runoff of washwater from the site or discharges to surface waters, storm sewers, or dry wells. No acids, bases, or metal brighteners will be used in the washwater and biodegradable, phosphate-free cleaners may be used sparingly

During construction, stormwater runoff will be managed on-site according to the best management practices (BMPs) as described in the NPDES 1200-C permit and associated draft Erosion and Sediment Control Plan (Exhibit I, Attachment I-1). Stormwater discharges would be managed in accordance with the NPDES 1200-C permit, and appropriate control measures would be installed to ensure compliance with the discharge and water quality requirements of the permit. During operations, the Facility may result in some changes to the stormwater drainage as a result of new impervious surfaces developed as part of this proposal (e.g., gravel roads, foundations for solar array posts, battery storage container pads, pads for substation components, etc.). However, impervious surfaces will be a low percentage of the total Facility and most of the area within the site boundary will be vegetated, which will serve as a buffer to promote infiltration and minimize stormwater runoff.

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.

4.4.1 Visual Impact Assessment Methodology

Visual impacts of the Facility are primarily related to views of the solar arrays, aboveground transmission lines, and, to a lesser degree (due to being collocated or dispersed amongst taller Facility infrastructure), other facilities such as the access roads, operations and maintenance buildings, substations, battery energy storage systems, and temporary constructions areas. 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.

In evaluating the visual impacts, the Applicant first determined whether the Facility would potentially be visible from each protected area using digital bare-earth terrain 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 Facility solar arrays and transmission lines might be visible.

To assess the potential visibility of the structures, the ZVI analysis was performed for the solar arrays and the transmission lines (Figure L-2). The analysis assumed a maximum height of 15 feet for the solar arrays. Additionally, a maximum height of 180 feet was assumed for the 230-kilovolt (kV) transmission lines. All other Facility infrastructure was deemed less visually impactful (due to height, being dispersed throughout the site boundary or adjacent to taller infrastructure, etc.) and addressed by the assessment of the solar array and transmission line infrastructure. A viewing height of 1.8 meters (6 feet) was assumed. Visibility of Facility infrastructure was defined by visible or not visible, indicated by color coding (see Figure L-2), and by proximity, i.e., foreground (less than 0.5 mile), middleground (0.5 to 5 miles), or background distances (more than 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. 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.

The solar array components are described in further detail in Exhibit B. The solar panels will be the most visible components of the solar arrays and will consist of solar module strings, mounted on single-axis tracker systems. The visibility of the solar arrays will depend primarily on topographic or other view obstructions and the distance from the viewer to the solar arrays. With a maximum height of 15 feet, the arrays will not be visible from sites lower in elevation than the area on which the array is constructed. From sites that are similar in elevation to the arrays, viewers will see only a line on the horizon, and not individual solar panels. Depending on the viewing distance, viewers at sites higher in elevation may have views of the panels, especially if the view direction is toward the angle at which the panel is tilted toward the sun. To the extent practicable, 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.

4.4.2 Visual Impact Assessment Results

Based on the results of the ZVI analysis, some portions of the Facility would potentially be visible from two protected areas in the analysis area, the Lindsay Prairie Preserve and Boardman RNA (see

Figure L-2 and Table L-1); the Oregon Trail Area of Critical Environmental Concern, Echo Meadows Interpretive Site will not be visible from the Facility and thus will receive no visual impacts.

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 existing visual context, particularly other sources of visual contrast present 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 three protected areas in the analysis area. Table L-1 also considers the visibility of the 230-kV transmission lines for the Facility. The analysis indicated potential foreground or middleground visibility of the Facility from portions of the Lindsay Prairie Preserve/SNHA and the Boardman RNA. Sections 4.4.2.1 and 4.4.2.2 provide a more in-depth visual impact assessment for these two protected areas.

4.4.2.1 Lindsay Prairie Preserve/State Natural Heritage Area

At the Lindsay Prairie Preserve/SNHA, 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 1.3 miles or greater in portions of the Preserve, primarily within the northeastern section. 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 transmission lines may also be visible at a distance of 2.4 miles or greater from portions of the Preserve, primarily in the northeastern section. If visible, the transmission lines 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. Note the existing Umatilla Electric Cooperative transmission line is closer to the Preserve than the proposed Facility transmission lines, further supporting that the Facility will have a negligible impact on the existing 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 Dalles Field Office representative, TNC, January 24, 2022). 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.

4.4.2.2 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 4.0 miles or greater in

portions of the RNA, primarily within the southeastern 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 transmission lines may also be visible at a distance of 4.0 miles or greater from portions of the RNA, primarily in the southeastern half. If visible, the transmission lines 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. Note that the existing Umatilla Electric Cooperative transmission line is closer to the Boardman RNA than the proposed Facility transmission lines, further supporting that the Facility will have a negligible impact on the existing 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.

4.5 Other Impacts

No other impacts to protected areas are anticipated.

5.0 Conclusions

The analysis area contains all or part of three 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, construction noise will be audible at two of the three protected areas (Lindsay Prairie Preserve and Boardman RNA), with sound levels equivalent or less than the sound level of a normal conversation (up to 56 decibels). However, the two impacted protected areas are not considered noise sensitive properties and serve the primary function of being a habitat preserve or natural area with little to no public visitation; thus, significant noise impacts from construction are not anticipated. Operational noise will attenuate to be indistinguishable from the background/ambient noise levels at all protected areas. 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. With implementation of BMPs and

implementation of a Construction Traffic Management Plan as part of the Road Use Agreement coordinated with the Morrow County Road Department and ODOT, 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 two of the three 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;	Table L-1
(ii) The basis for protection by reference to a specific subsection of OAR 345-001-0010(26); and	Table L-1
(iii) The name, mailing address, phone number, and email address of the land management agency or organization with jurisdiction over the protected area;	Table L-1
(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

Requirement	Location
(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;	N/A
(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)(a), the Council may issue a site certificate for:	–
(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	–
(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;	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

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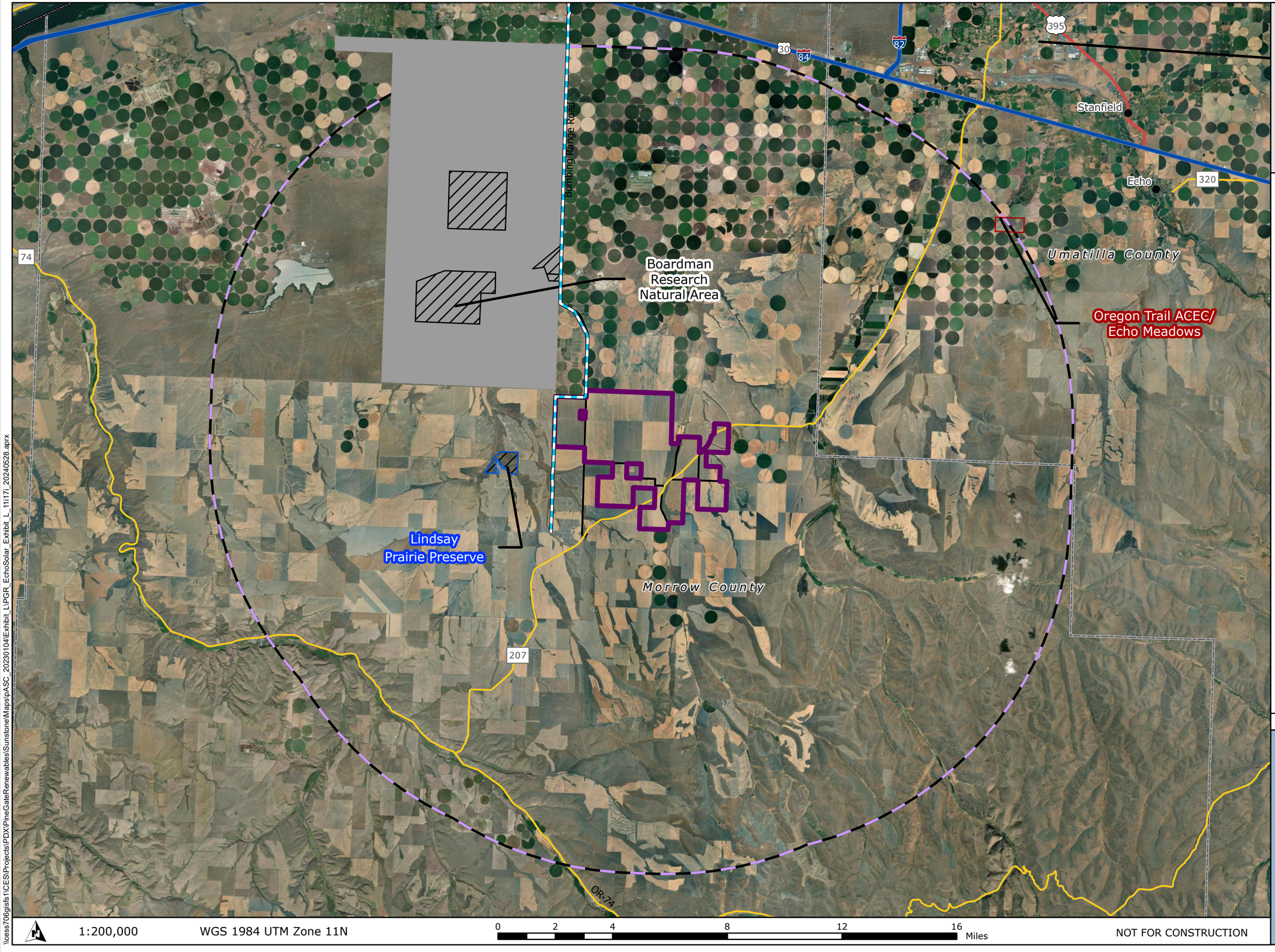
Figures

Sunstone Solar Project

Figure L-1
Protected Areas within the Analysis Area

MORROW COUNTY, OR



- Site Boundary
- Analysis Area (12-mile Buffer)
- City/Town
- County Boundary
- State Boundary
- Interstate Highway
- US Highway
- State Highway
- Major Road
- Existing UEC Transmission Line
- Boardman Bombing Range
- BLM Area of Critical Environmental Concern
- BLM Research Natural Areas
- State Natural Heritage Area

TETRA TECH PINEGATE RENEWABLES

Reference Map

1:200,000 WGS 1984 UTM Zone 11N

0 2 4 8 12 16 Miles

NOT FOR CONSTRUCTION

\\cess706gisfs1\CES\Projects\PDX\PineGateRenewables\SunstoneMaps\pASC_20230104\Exhibit_L\PGR_EchoSolar_Exhibit_L_11i17i_20240528.aprx

Sunstone Solar Project

Figure L-2.1 Viewshed Analysis for Transmission/ Collector Lines

MORROW COUNTY, OR

- Site Boundary
- Analysis Area (12-mile Buffer)
- Overhead Transmission Line
- City/Town
- County Boundary
- State Boundary
- Interstate Highway
- US Highway
- State Highway
- Major Road
- Existing UEC Transmission Line

Viewshed Results

- Transmission/Collector Lines Not Visible
- Transmission/Collector Lines Potentially Visible

*Potential transmission line visibility calculated using a 30 meter bare-earth digital elevation model with turbine heights of 180 feet (54.86 meters) and a viewing height of 6 feet (1.8 meters).

TETRA TECH

PINEGATE RENEWABLES

- Boardman Bombing Range
- BLM Area of Critical Environmental Concern
- BLM Research Natural Areas
- State Natural Heritage Area

Reference Map

1:200,000 WGS 1984 UTM Zone 11N

0 2 4 8 12 16 Miles

NOT FOR CONSTRUCTION

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Sunstone Solar Project

Figure L-2.2 Viewshed Analysis for Solar Array

MORROW COUNTY, OR

- Site Boundary
- Analysis Area (12-mile Buffer)
- City/Town
- County Boundary
- State Boundary
- Interstate Highway
- US Highway
- State Highway
- Major Road
- Existing UEC Transmission Line

Viewshed Results

- Solar Array Not Visible
- Solar Array Potentially Visible

*Potential solar array visibility calculated using a 30 meter bare-earth digital elevation model with a maximum solar panel height of 15 feet (4.57 meters) and a viewing height of 6 feet (1.8 meters).

TETRA TECH PINEGATE RENEWABLES

Reference Map

- Boardman Bombing Range
- BLM Area of Critical Environmental Concern
- BLM Research Natural Areas
- State Natural Heritage Area

1:200,000 WGS 1984 UTM Zone 11N

0 2 4 8 12 16 Miles

NOT FOR CONSTRUCTION

\\cess706gisfs1\CES\Projects\PDX\PineGateRenewables\SunstoneMaps\pASC_20230104\Exhibit_L\PGR_EchoSolar_Exhibit_L_11i17i_20240528.aprx