# Request for Amendment #5 for the Wheatridge Wind Energy Facility

**Prepared for**

NEXTera® ENERGY RESOURCES

**Prepared by**

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**April 2020**

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# Acronyms and Abbreviations

| | |
|---|---|
| ASC | Application for Site Certificate |
| Certificate Holder | Wheatridge Wind Energy, LLC |
| Council | Energy Facility Siting Council |
| FAA | Federal Aviation Administration |
| Facility | Wheatridge Wind Energy Facility |
| kV | kilovolt |
| MW | megawatt |
| NEER | NextEra Energy Resources, LLC |
| O&M | operations and maintenance |
| OAR | Oregon Administrative Rules |
| ODA | Oregon Department of Aviation |
| ODFW | Oregon Department of Fish and Wildlife |
| ODOE | Oregon Department of Energy |
| OPUC | Oregon Public Utility Commission |
| ORS | Oregon Revised Statutes |
| PGE | Portland General Electric Company |
| RFA 1 | First Request for Amendment |
| RFA 2 | Second Request for Amendment |
| RFA 3 | Third Request for Amendment |
| RFA 4 | Fourth Request for Amendment |
| RFA 5 | Fifth Request for Amendment |
| SCADA | Supervisory Control and Data Acquisition |
| WAGS | Washington ground squirrel |
| WREFI | Wheatridge Renewable Energy Facility I |
| WREFII | Wheatridge Renewable Energy Facility II |

# 1.0 Introduction

## 1.1 Project Summary

Wheatridge Wind Energy, LLC (Certificate Holder) and Wheatridge Wind II, LLC wholly-owned, indirect subsidiaries of NextEra Energy Resources, LLC (NEER) are submitting a Fifth Request for Amendment (RFA 5) for the Wheatridge Wind Energy Facility (Facility). The Facility is a wind energy facility approved by the Energy Facility Siting Council (Council) with a capacity to generate up to 500 megawatts (MW) of electricity, with up to 292 wind turbines, and a solar energy generation facility with approximately 150 MW capacity. The Facility is divided into two sections, Wheatridge West and Wheatridge East. Wheatridge West is located entirely within Morrow County, bisected by Oregon Highway 207, and is approximately 5 miles northeast of Lexington and 7 miles northwest of Heppner. Wheatridge East is located approximately 16 miles northeast of Heppner, and includes land in both Morrow and Umatilla counties. Wheatridge West and Wheatridge East are connected via a 230-kilovolt (kV) transmission line (Intraconnection Line). Additional related or supporting facilities to the Facility will include an electrical collection system, collector substations, meteorological towers, communication and Supervisory Control and Data Acquisition (SCADA) systems, operations and maintenance (O&M) buildings, new or improved access roads, battery storage, and temporary construction areas.

At this time, the Wheatridge West portion of the Facility is in the construction phase; all pre-construction conditions have been met. The Facility was the prevailing bid submitted in response to a request for proposals for renewable resources that Portland General Electric Company (PGE) issued in May 2018 (Attachment 1). Once constructed, PGE will own 100 MW of wind energy of the Wheatridge West portion of the Facility. Wheatridge Wind II, LLC [1] will own the balance of the Facility and sell its output to PGE under power purchase agreements. Wheatridge Wind II, LLC will continue to build and operate the Facility. The split ownership and power purchase agreements structure will allow the two energy companies to share project risks and benefits.

Therefore, RFA 5 requests the Council's approval for the following proposed changes:

1. Partition or split the Facility to create a separate 100 MW wind energy facility with its own Site Certificate. The new facility would be named Wheatridge Renewable Energy Facility I (WREFI). Wheatridge Wind Energy, LLC will remain the Site Certificate Holder for WREFI. Pursuant to Oregon Revised Statutes (ORS) 469.320(8)(a)(A), the Certificate Holder elects to defer regulatory authority to the Council for a facility with an average electric generating capacity of less than 50 MW (150 MW nameplate) produced from wind energy[2].

[1] Section 7.0 of RFA 5 is a request to transfer the balance of the Facility to Wheatridge Wind II, LLC, a wholly-owned, indirect subsidiary of NEER. Therefore, Wheatridge Wind II, LLC will be the owner.
[2] Per ORS 469.300(11)(a)(J), an "Energy facility" means, "An electric power generating plant with an average electric generating capacity of 50 megawatts or more if the power is produced from geothermal or wind energy at a single energy facility or within a single energy generation area."

2. Change the name of the remaining portions of the Facility from Wheatridge Wind Energy Facility to Wheatridge Renewable Energy Facility II (WREFII) to reflect the addition of solar energy generation to the Facility in the Fourth Request for Amendment (RFA 4) and change the Site Certificate Holder for WREFII to Wheatridge Wind II, LLC a wholly-owned, indirect subsidiary of NEER.[3]

## 1.2 Procedural History

The Site Certificate for the Facility was issued in April 2017 and became effective May 24, 2017. On May 17, 2017, the Certificate Holder provided notice, pursuant to Oregon Administrative Rules (OAR) 345-027-0100(2), to the Oregon Department of Energy (ODOE) of a transfer of ownership of the Certificate Holder. On June 14, 2017, the Certificate Holder filed a Request for Transfer of ownership of the Facility Site Certificate; this was the First Request for Amendment (RFA 1). The First Amended Site Certificate for the Facility was approved in July 2017 and became effective August 11, 2017. The Second Request for Amendment (RFA 2) to add energy storage for the Facility was submitted concurrently to the Third Request for Amendment (RFA 3) to increase the maximum turbine blade tip height. The second amended Site Certificate was issued November 16, 2018 and became effective November 29, 2018. The Third Amended Site Certificate was issued December 14, 2018 and became effective February 7, 2019. The purpose of RFA 4 was to add a solar facility. The Fourth Amended Site Certificate became effective November 22, 2019.

## 1.3 Amendment Required under OAR 345-027-0350 and Review Process under OAR 345-027-0351

*Except for changes allowed under OAR 345-027-0353 of this rule, an amendment to a site certificate is required to:*

*(1) Transfer ownership of the facility or the certificate holder as described in OAR 345-027-0400;*

*(2) Apply later-adopted law(s) as described in OAR 345-027-0390;*

*(3) Extend the construction beginning or completion deadline as described in OAR 345-027-0385;*

*(4) Design, construct or operate a facility in a manner different from the description in the site certificate, if the proposed change:*

*(a) Could result in a significant adverse impact that the Council has not addressed in an earlier order and the impact affects a resource or interest protected by an applicable law or Council standard;*

[3] References to "the Facility" in this amendment request reflect WREFI and WREFII combined as one Facility. As noted on page 1, although RFA 5 will split the Site Certificate, the Facility will be constructed and operated as a singular Facility within the previously approved Site Boundary and with the same approved facilities.

*(b) Could impair the certificate holder's ability to comply with a site certificate condition; or*

*(c) Could require a new condition or a change to a condition in the site certificate.*

An amendment is required pursuant to OAR 345-027-0400 for the transfer of a portion of the Facility to a new certificate holder. In addition, the Facility and Site Certificate split will result in the Facility being operated in a manner different from the description in the Site Certificate, albeit the changes in operation would be primarily administrative, it requires new or changed conditions; therefore, an amendment will be required pursuant to OAR 345-027-0360. Because the transfer amendment cannot can be completed before the Site Certificate is split, NEER requests that the two amendment types be combined and reviewed pursuant to OAR 345-027-0351(5).

There will be no physical changes to the previously approved Facility or Site Boundary, substantive changes to conditions other than necessary to facilitate the split, and the record for the Facility has been repeatably opened and reviewed since issuance of the Site Certificate in 2017 (RFA 1, RFA 2, RFA 3, and RFA 4). Thus, the Type B review process is the appropriate amendment review process for this request. Therefore, RFA 5 also serves as an Amendment Determination Request pursuant to OAR 345-027-0357(3) to demonstrate that the Type B review process is the appropriate process for the proposed changes. Accordingly, the following analysis of OAR 345-027-0057(8) addresses the evaluation criteria for the Type B process further substantiated by the information provided in the entirety of RFA 5.

*OAR 345-027-0357(8) In determining whether a request for amendment justifies review under the type B review process described in 345-027-0351(3), the Department and the Council may consider factors including but not limited to:*

*OAR 345-027-0357(8)(a) The complexity of the proposed change;*

There will be no new areas of Site Boundary; therefore, there are no new areas or resources (e.g., different habitat types) to consider that were not previously evaluated. This request does not seek to change the physical components of the previously approved Facility. In general, the proposed changes lack complexity and are administrative in nature; they are essentially routine documentation as part of commercial energy sales and operations. Ultimately, the Facility will be constructed and operated substantially in the same manner as approved by the Council, which imposed conditions, as necessary.

*OAR 345-027-0357(8)(b) The anticipated level of public interest in the proposed change;*

The Council has already imposed conditions in response to past public comments during the siting process and subsequent request for amendments. The proposed division of the Facility into two facilities and a change in certificate holder will not result in any changes to the Facility that will affect the public. Any public interest is anticipated to largely be in support of the Facility, similar to the positive public interest during the Application for Site Certificate (ASC) process, amendment requests, and response to public announcements (see Attachment 1).

*OAR 345-027-0357(8)(c) The anticipated level of interest by reviewing agencies;*

There will be no new areas of Site Boundary. Reviewing agencies commented on the ASC and Draft Proposed Order, which informed the development of the Site Certificate conditions. The Certificate Holder is coordinating with agencies that may be interested in the changes, such as the Morrow County Planning Department in advance of submittal. The Certificate Holder understands that ODOE's review includes outreach to respective agencies as a matter of process, but it is anticipated that their interest will be low in comparison to other energy project reviews because there will be no physical changes to the Facility. Because the proposed division into two facilities will comply with all existing conditions, the anticipated level of interest by reviewing agencies is low.

*OAR 345-027-0357(8)(d) The likelihood of significant adverse impact; and*

The Council approved the use of micrositing corridors (Site Boundary) for the Facility to allow flexibility in siting of the wind generation components in order to account for geotechnical and other constraints and turbine procurement options during final design. Therefore, the potential for significant adverse impacts from infrastructure within the Site Boundary has already been reviewed. RFA 5 proposes a division of the Facility into two facilities—all within the previously approved Site Boundary—such that there is little likelihood of significant adverse impact.

*OAR 345-027-0357(8)(e) The type and amount of mitigation, if any.*

There will be no new areas of Site Boundary nor any changes to the approved facilities; therefore, there are no new impacts to consider that were not previously evaluated. The proposed division of the Facility into two facilities will not result in new mitigation for temporary and permanent habitat impacts.

# 2.0 Certificate Holder Information – OAR 345-027-0360(1)(a)

*OAR 345-027-0360(1) To request an amendment to the Site Certificate required by OAR 345-027-0350(3) and (4), the certificate holder shall submit a written preliminary request for amendment to the Department of Energy that includes the following:*

*OAR 345-027-0360(1)(a) The name of the facility, the name and mailing address of the certificate holder, and the name, mailing address, email address and phone number of the individual responsible for submitting the request.*

## 2.1 Name of the Facility

The current name of the Facility is Wheatridge Wind Energy Facility and the Certificate Holder is Wheatridge Wind Energy, LLC. RFA 5 is requesting to split the Facility into two separate facilities: 1. Wheatridge Renewable Energy Facility I; the Certificate Holder remains Wheatridge Wind Energy, LLC; and 2. Wheatridge Renewable Energy Facility II, with a Certificate Holder of Wheatridge Wind II, LLC. Both Wheatridge Wind Energy, LLC and Wheatridge Wind II, LLC are wholly-owned, indirect

subsidiaries of NEER. The contact information for both Wheatridge Wind Energy, LLC and Wheatridge Wind II, LLC are the same and provided below.

## 2.2 Name and Mailing Address of the Certificate Holder

David Lawlor[4]
Wheatridge Wind Energy, LLC
FEW/JB
700 Universe Blvd.
Juno Beach, FL 33408

## 2.3 Current Parent Company of Certificate Holder

Matt Handel
NextEra Energy Resources, LLC
FEW/JB
700 Universe Blvd
Juno Beach, FL 33408

## 2.4 Name and Mailing Address of the Individuals Responsible for Submitting the Request

Mike Pappalardo
Environmental Manager
NextEra Energy Resources, LLC
JES/JB
700 Universe Blvd
Juno Beach, FL 33408

Mike.Pappalardo@nexteraenergy.com
(541) 206-1005

# 3.0 Detailed Description of the Proposed Change – OAR 345-027-0360(1)(b)

*OAR 345-027-0360(1)(b) A detailed description of the proposed change, including:*

[4] Note, the previous certificate holder contact person was Jesse Marshall. However, NEER is requesting to change to David Lawlor. Mr. Lawlor has worked in the power generation and utility fields for 20 years the last 3 ½ with NEER. He has developed, originated and/or permitted over 1,000 MW of power generation across north western North America. Mr. Lawlor holds a Bachelors degree in geography from University of Saskatchewan and Master Environmental Studies degree from Dalhousie University.

As noted above, the Certificate Holder seeks Council approval to:

1. Partition or split the Facility to create a separate 100 MW wind energy facility with its own Site Certificate. The new facility would be named Wheatridge Renewable Energy Facility I (WREFI) and would have areas of overlapping Site Boundary and shared related or supporting facilities with WREFII (see Figures 1 and 2). At this time, the Certificate Holder would remain Wheatridge Wind Energy, LLC a wholly-owned, indirect subsidiary of NEER. Pursuant to ORS 469.320(8)(a)(A), the Certificate Holder elects to defer regulatory authority to the Council for a facility with an average electric generating capacity of less than 50 MW (150 MW nameplate) produced from wind energy[5].

   A request to transfer the Site Certificate ownership for WREFI from NEER to PGE will occur closer to the completion of WREFI's construction.

2. Change the name of the remaining portions of the Facility from Wheatridge Wind Energy Facility to Wheatridge Renewable Energy Facility II (WREFII), creating a 400 MW wind energy facility and a solar facility. Change the Site Certificate Holder for WREFII to Wheatridge Wind II, LLC a wholly-owned, indirect subsidiary of NEER.

This request does not seek to change the previously approved Site Boundary or physical components of the approved Facility; instead, it partitions off a portion of the Facility to create a new Council-jurisdictional 100 MW wind facility. Table 1 provides a description of how the Facility would be split per the description in the existing Site Certificate. As noted in Table 1, the partitioned facilities would have areas of overlapping Site Boundaries and some shared related or supporting facilities. The Site Certificate for WREFI would only include the conditions applicable to WREFI, as described in Table 2 and Attachment 2. Documentation of the agreement for shared common facilities is included in Attachment 3. As identified in Table 2, the Site Certificate conditions for WREFI would generally mirror the existing Site Certificate conditions, except for conditions or parts of conditions that specifically apply to Umatilla County or solar. Although pre-construction conditions are included in Table 2 and the red-lined Site Certificate (Attachment 2), these conditions were fulfilled as part of pre-construction compliance for Wheatridge West and compliance applies in perpetuity to the facility that was developed as Wheatridge West. Thus, the pre-construction conditions have been met for the purposes of the WREFI Site Certificate and similarly for the WREFII Site Certificate as they apply to Wheatridge West. The Site Certificate conditions for WREFII would remain the same except where the Facility description would be changed in the Site Certificate removing the WREFI facilities and the associated retirement cost would be updated to reflect the removal of 100 MW of wind.

[5] Per ORS 469.300(11)(a)(J), an "Energy facility" means "An electric power generating plant with an average electric generating capacity of [35] 50 megawatts or more if the power is produced from geothermal or wind energy at a single energy facility or within a single energy generation area."

**Table 1. Proposed Descriptions of the Partitioned Facilities**

| Infrastructure Type | Approved Site Certificate Description | WREFI Description | WREFII Description | Explanation |
|---|---|---|---|---|
| Total Generating Capacity | The total generation capacity of the facility with wind and solar components is 650 MW. Wind energy generation components will include up to 292 wind turbines with a total generating capacity up to 500 MW. | The total generating capacity of the WREFI will not exceed 100 MW and the total number of turbines will not exceed 40. | The total generating capacity of WREFII will not exceed 400 MW of wind energy and the total number of turbines will not exceed 252. | The total generating capacity for wind energy for the two facilities combined will be 500 MW, as previously approved by Council. The total number of turbines will not exceed the Council's previously approved 292 turbines. |
| Electrical Collection System | The electrical collection system will include up to 88 miles of mostly underground 34.5-kV collector lines and up to 10.8 miles of overhead collector lines. | The electrical collection system for WREFI includes up to 20 miles of mostly underground collector lines. | Electrical collection system includes up to 68 miles of mostly underground 34.5-kV collector lines; this includes up to 10.8 miles of overhead collector lines, as needed. | Some extents of collector lines for both WREFI and WREFII will be in the overlapping Site Boundary. Total length will not exceed 88 miles as previously approved by Council. |
| Collector Substations | The facility will include up to two substations, however, the Council approved the ability to microsite up to three substations within the micrositing corridor. | WREFI has one collector substation that will be shared with WREFII. | The facility includes up to two substations within Wheatridge West (one of these shared with WREFI) and one substation within Wheatridge East. | WREFI will share one of WREFII's substations in the overlapping Site Boundary. |
| Transmission Lines | The facility will include one or two parallel overhead 230 kV intraconnection transmission lines extending 24.5 to 31.5 miles in length. | N/A | The facility includes up to 32 miles of transmission lines, consisting of up to two overhead, parallel 230-kV transmission lines. | WREFI does not include a 230-kv transmission line. |
| Meteorological Towers | The facility will include up to 12 permanent meteorological (met) towers. | WREFI includes up to two permanent meteorological towers. | WREFII includes up to 10 permanent meteorological towers. | This provides for one met tower and one alternative for WREFI. |
| Communications and SCADA System | The facility will include a communication system and a Communication and SCADA System. | WREFI includes Wind controller and Wind SCADA, but will share the SCADA System with WREFII in the Shared Site Boundary. | WREFII will have its own Wind controller and Wind SCADA, but will share the SCADA System with WREFI in the Shared Site Boundary. | WREFI will use portions of the WREFII SCADA system in the overlapping Site Boundary. Each facility will also have its own Wind controller and Wind SCADA. |
| O&M Buildings | The facility will include up to two O&M Buildings. | WREFI will use the WREFII O&M Building in the overlapping Site Boundary. | WREFII includes up to two O&M Buildings, with one shared with WREFI. | WREFI will use the WREFII O&M Building in the overlapping Site Boundary. The O&M Building is not a related or supporting facility to WREFI. |
| Access Roads | Wind energy facility components will require up to 73 miles of access roads. | WREFI includes up to 12 miles of new or improved access roads. | WREFII includes up to 61 miles of new or improved access roads. | WREFI and WREFII access roads may be shared. |
| Temporary Construction Areas | The facility will include up to four temporary construction yards including one or more temporary concrete batch plant areas. | WREFI includes temporary construction areas that include staging areas and one or more temporary concrete batch plant areas. | WREFII includes temporary construction areas that include staging areas and one or more temporary concrete batch plant areas. | Staging areas will be shared for construction. |
| Battery Storage and Interconnection | The facility will include a battery storage system and interconnection facility. | WREFI includes the battery storage adjacent to the substation at Wheatridge West and associated interconnection facilities. | WREFII includes battery storage systems (20 and 30 MW, each located on up to 5 acres) and interconnection facilities. | The overlapping Site Boundary by the substation provides the optionality for either facility to construct battery storage with a maximum permanent footprint of up to 5 acres. |
| Solar Facility/Distributed Energy Storage | The facility will include up to two solar array facilities and distributed energy storage. | WREFI does not contain solar or distributed energy storage facilities. | WREFII includes an approximately 150 MW solar facility with distributed energy storage. | WREFI does not include solar facilities. |

**Table 2. Site Certificate Conditions for the Split Facility**

| Standard | Site Certificate Conditions | WREFI Site Certificate Condition? | Reason |
|---|---|---|---|
| OAR 345-022-0000<br>General Standard of Review | GEN-GS-01: Commencement of construction[1] | Yes | This is a mandatory condition (Mandatory Condition OAR 345-025-0006(4)). This condition will be amended to remove references to solar. |
| | GEN-GS-02: Completion of construction[1] | Yes | This is a mandatory condition (Mandatory Condition OAR 345-025-0006(4)). This condition will be amended to remove references to solar. |
| | GEN-GS-03: Compliance during all phases | Yes | Applies to all phases of the Facility including post construction phases. This is a mandatory condition (Mandatory Condition OAR 345-025-0006(3)). |
| | GEN-GS-04: Permission to construct | Yes | This is a mandatory condition (Mandatory Condition OAR 345-025-0006(5)). |
| | GEN-GS-05: Notification of environmental impacts | Yes | This is a mandatory condition (Mandatory Condition OAR 345-025-0006(6)) which applies to all phases. |
| | GEN-GS-06: Inclusion of representations | Yes | This is a mandatory condition (Mandatory Condition OAR 345-025-0006(10)) which applies to all phases. |
| | GEN-GS-07: Vegetation restoration | Yes | This is a mandatory condition (Mandatory Condition OAR 345-025-0006(11)) which applies to the post-construction phase. |
| | GEN-GS-08: Construct to prioritize human safety | Yes | This is a mandatory condition (Mandatory Condition OAR 345-025-0006(12)). |
| | GEN-GS-09: Notification of foundation changes | Yes | This is a mandatory condition (Mandatory Condition OAR 345-025-0006(13)). |
| | GEN-GS-10: Notification of other geological observations | Yes | This is a mandatory condition (Mandatory Condition OAR 345-025-0006(14)). |
| | GEN-GS-11: Notification of new owners | Yes | This is a mandatory condition (Mandatory Condition OAR 345-025-0006(14)) that applies to all project phases. |
| | GEN-GS-12: Specification of corridor[1] | No | Not applicable. WREFI does not include a pipeline or transmission corridor. |
| | OPR-GS-01: Submission of legal description | Yes | This is a mandatory, post-construction condition (Mandatory Condition OAR 345-025-0006(2)). |
| OAR 345-022-0010<br>Organizational Expertise | GEN-OE-01: Responsibility of non-compliance | Yes | This condition applies to all project phases. This condition is necessary to meet the Council's Organizational Expertise standard. |
| | GEN-OE-02: Report of Site Certificate violations | Yes | This condition applies to all project phases. This condition is necessary to meet the Council's Organizational Expertise standard. |
| | GEN-OE-03: Report of change in corporate structure | Yes | This condition applies to all project phases. This condition is necessary to meet the Council's Organizational Expertise standard. |
| | GEN-OE-04: Compliance with laws for battery disposal & transport | Yes | WREFI may include battery storage facilities. |
| | PRE-OE-01: Notification of contractor identities | Yes | Although this is for the pre-construction phase, this is a standard Site Certificate condition necessary to meet the applicable council standard for the Facility Site Certificate and create an independent obligation for WREFI. |
| | PRE-OE-02: Notification of construction manager | Yes | Although this is for the pre-construction phase, this is a standard Site Certificate condition necessary to meet the applicable council standard for the Facility Site Certificate and create an independent obligation for WREFI. |
| | PRE-OE-03: Compliance of construction workers | Yes | Although this is for the pre-construction phase, this is a standard Site Certificate condition necessary to meet the applicable council standard for the Facility Site Certificate and create an independent obligation for WREFI. |
| | PRE-OE-04: Notification of non-surveying activities | Yes | Although this is for the pre-construction phase, this is a standard Site Certificate condition necessary to meet the applicable council standard for the Facility Site Certificate and create an independent obligation for WREFI. |
| | PRE-OE-05: Proof of aggregate source and county permits[1] | Yes | Although this is for the pre-construction phase, this is a standard Site Certificate condition necessary to meet the applicable council standard for the Facility Site Certificate and create an independent obligation for WREFI. A minor text edit is needed to remove reference to Umatilla County. |
| | PRE-OE-06: Proof of third-party approvals and permits[1] | Yes | Because WREFI is located in Morrow County, this condition will be changed to only reflect Morrow County and only *(a)* applies because (b) and (c) are specific to solar. |

| Standard | Site Certificate Conditions | WREFI Site Certificate Condition? | Reason |
|---|---|---|---|
| OAR 345-022-0020<br>Structural Standard | GEN-SS-01: Compliance with building codes | Yes | Although this is for the pre-construction phase, this is a standard Site Certificate condition necessary to meet the applicable council standard for the Facility Site Certificate and create an independent obligation for WREFI. |
| | PRE-SS-01: Geological investigation reporting | Yes | Although this is for the pre-construction phase, this is a standard Site Certificate condition necessary to meet the applicable council standard and create an independent obligation for WREFI. |
| | PRE-SS-02: Investigation of active faults | Yes | Although this is for the pre-construction and construction phases, this is a standard Site Certificate condition necessary to meet the applicable council standard for the Facility Site Certificate and create an independent obligation for WREFI. The condition references fault 2438 in Umatilla County. This reference is removed because WREFI has no components in Umatilla County. |
| | PRE-SS-03: Investigation of slope instability | Yes | Although this is for the pre-construction and construction phases, this is a standard Site Certificate condition necessary to meet the applicable council standard for the Facility Site Certificate and create an independent obligation for WREFI. |
| | PRE-SS-04: Investigation of loess soil | Yes | Although this is for the pre-construction and construction phases, this is a standard Site Certificate condition necessary to meet the applicable council standard for the Facility Site Certificate and create an independent obligation for WREFI. |
| OAR 345-022-0022<br>Soil Protection | PRE-SP-01: Spill Prevention, Control, and Countermeasure construction plans | Yes | Although this is for the pre-construction and construction phases, this is a standard Site Certificate condition necessary to meet the applicable council standard for the Facility Site Certificate and create an independent obligation for WREFI. |
| | PRE-SP-02: Restoration of agricultural soils | Yes | Although this is for the pre-construction and construction phases, this is a standard Site Certificate condition necessary to meet the applicable council standard for the Facility Site Certificate and create an independent obligation for WREFI. |
| | PRE-SP-03: Septic system permitting | No | WREFI may use the O&M Facility, but that WREFII will be the holder of any Oregon Department of Environmental Quality permits for the building. |
| | CON-SP-01: Erosion and Sediment Control Plan | Yes | Although this is for the pre-construction and construction phases, this Site Certificate condition is necessary to meet the applicable council standard for the Facility Site Certificate and create an independent obligation for WREFI. |
| | CON-SP-02: Best management practices to be included in Erosion and Sediment Control Plan | Yes | Although this is for the pre-construction and construction phases, this Site Certificate condition is necessary to meet the applicable council standard for the Facility Site Certificate and create an independent obligation for WREFI. |
| | PRO-SP-01: Submission of operational Spill Prevention, Control, and Countermeasure[1] | Yes | This condition applies to pre-operation and operation phase. This Site Certificate condition is necessary to meet the applicable council standard for the Facility Site Certificate and create an independent obligation for WREFI. However, the condition for WREFI will be amended to exclude references to the O&M Building. |
| | OPR-SP-01: Prevention of erosion, soil disturbance | Yes | Applies to the operation phase of a Facility, specifically access road and other wind facilities used for maintenance. This Site Certificate condition is necessary to meet the applicable council standard for the Facility Site Certificate and create an independent obligation for WREFI. |
| OAR 345-022-0030<br>Land Use | GEN-LU-01: Compliance with county setbacks[1] | Yes | Although this is for the pre-construction and construction phases, this Site Certificate condition is necessary to meet the applicable council standard for the Facility Site Certificate and create an independent obligation for WREFI. This condition will be amended to remove references to solar. |
| | GEN-LU-02: County road permits and standards | Yes | Although this is for the pre-construction and construction phases, this is a standard Site Certificate condition necessary to meet the applicable council standard for the Facility Site Certificate and create an independent obligation for WREFI. |
| | GEN-LU-03: Meteorological tower requirements | Yes | Although this is for the pre-construction and construction phases, this is a standard Site Certificate condition necessary to meet the applicable council standard for the Facility Site Certificate and create an independent obligation for WREFI. |
| | GEN-LU-04: Usage of minimum land area[1] | Yes | Although this is for the pre-construction and construction phases, this is a standard Site Certificate condition necessary to meet the applicable council standard for the Facility Site Certificate and create an independent obligation for WREFI. This condition will be amended to remove references to solar. |
| | GEN-LU-05: Blending with natural surroundings | Yes | Although this is for the pre-construction and construction phases, this is a standard Site Certificate condition necessary to meet the applicable council standard for the Facility Site Certificate and create an independent obligation for WREFI. |

| Standard | Site Certificate Conditions | WREFI Site Certificate Condition? | Reason |
|---|---|---|---|
| | GEN-LU-06: Micro siting to minimum road/highway setbacks | No | Not applicable. This condition is primarily for Umatilla County except for subcondition (a), which repeats the sub condition *(d)* in GEN-LU-01. WREFI is located in Morrow County. |
| | GEN-LU-07: Blending of operations and maintenance building | No | Not applicable. This condition applies to Umatilla County. WREFI is in Morrow County. |
| | GEN-LU-08: Best management of access roads | No | Not applicable. This condition applies to Umatilla County. WREFI is in Morrow County. |
| | GEN-LU-09: Notification of project infrastructure locations | No | Not applicable. This condition applies to Umatilla County. WREFI is in Morrow County. |
| | GEN-LU-10: Delivery of annual report | No | Not applicable. This condition applies to Umatilla County. WREFI is in Morrow County. |
| | PRE-LU-01: Obtain local permitting | Yes | Although this is for the pre-construction and construction phases, this is a standard Site Certificate condition necessary to meet the applicable council standard for the Facility Site Certificate and create an independent obligation for WREFI. |
| | PRE-LU-02: Obtain Conditional Use Permit | Yes | Although this is for the pre-construction and construction phases, this is a standard Site Certificate condition necessary to meet the applicable council standard for the Facility Site Certificate and create an independent obligation for WREFI. |
| | PRE-LU-03: Preparation of Weed Control Plan[1] | Yes | This condition applies to all project phases, but will be amended to remove references to Umatilla County. |
| | PRE-LU-04: Recording of a Covenant Not to Sue for Morrow County[1] | Yes | This condition is a pre-construction requirement that applies to an area of land. |
| | PRE-LU-05: Consultation with landowners[1] | Yes | Although this is for the pre-construction and construction phases, this is a standard Site Certificate condition necessary to meet the applicable council standard for the Facility Site Certificate and create an independent obligation for WREFI. This condition will be amended to remove references to Umatilla County. |
| | PRE-LU-06: Identification of construction traffic concerns | Yes | Although this is for the pre-construction and construction phases, this is a standard Site Certificate condition necessary to meet the applicable council standard for the Facility Site Certificate and create an independent obligation for WREFI. |
| | PRE-LU-07: Obtaining county zoning permits | No | This condition applies to Umatilla County. WREFI is in Morrow County. |
| | PRE-LU-08: Installation of gates and signs to private access roads | Yes | Applicable, but only required if requested by the underlying landowner. |
| | PRE-LU-09: Recording of a Covenant Not to Sue for Umatilla County | No | Not applicable. This condition applies to Umatilla County. WREFI is in Morrow County. |
| | CON-LU-01: Minimization of footprint | Yes | Although this is for the pre-construction and construction phases, this is a standard Site Certificate condition necessary to meet the applicable council standard for the Facility Site Certificate and create an independent obligation for WREFI. |
| | CON-LU-02: Installation of bird deterring devices | Yes | Although this is for the pre-construction and construction phases, this is a standard Site Certificate condition necessary to meet the applicable council standard for the Facility Site Certificate and create an independent obligation for WREFI. |
| | CON-LU-03: Installation of underground cable system | Yes | Although this is for the pre-construction and construction phases, this is a standard Site Certificate condition necessary to meet the applicable council standard for the Facility Site Certificate and create an independent obligation for WREFI. |
| | OPR-LU-01: Submission of as-built surveys for construction phases | Yes | This condition applies to operation phase. |
| | OPR-LU-02: Restoration of disturbed areas | Yes | This condition applies to operation phase. |
| | OPR-LU-03: Completion of final retirement plan[1] | Yes | This condition applies to post-operation/retirement phases. The condition will be amended to only apply to Morrow County where the Facility is located. |
| | OPR-LU-04: Preparation of Operating and Facility Maintenance Plan[1] | Yes | This condition applies to operation phases. The condition will be amended to only apply to Morrow County where the Facility is located. |
| | OPR-LU-05: Submission of as-built changes | No | Not applicable. This condition applies to Umatilla County. WREFI is in Morrow County. |
| | OPR-LU-06: Retirement restoration activities | Yes | This condition applies to applies to post-operation/retirement phases and is necessary to meet Council standard OAR 345-022-0050. |
| OAR 345-022-0040<br>Protected Areas | N/A | N/A | N/A |
| OAR 345-022-0050 | GEN-RF-01: Prevention of non-restorable site | Yes | This is a mandatory condition (Mandatory Condition OAR 345-025-0006(6)). |

| Standard | Site Certificate Conditions | WREFI Site Certificate Condition? | Reason |
|---|---|---|---|
| Retirement and Financial Assurance | PRE-RF-01: Letter of credit to restore site to non-hazardous condition | Yes | This is a mandatory condition (Mandatory Condition OAR 345-025-0006(8)). |
| | PRE-RF-02: Letter of credit naming State as payee[1] | Yes | This condition will be modified to also reflect a letter of credit naming the State after the transfer of ownership for WREFI. In addition, the bond or letter of credit amount will be $3.4 million. This condition will be amended to remove references to solar. |
| | OPR-RF-01: Evidence of monthly inspections of battery storage and insurance for high loss catastrophic events | Yes | WREFI includes battery storage facilities. |
| | RET-RF-01: Compliance with retirement plan | Yes | This is a mandatory condition (Mandatory Condition OAR 345-025-0006(9)) that applies to retirement phase. |
| | RET-RF-02: Retirement of Facility upon cessation of activities | Yes | This is a mandatory condition (Mandatory Condition OAR 345-025-0006(16)) that applies to retirement phase. |
| OAR 345-022-0060<br>Fish and Wildlife Habitat | GEN-FW-01: Speed limit requirement | Yes | Although this is for the pre-construction and construction phases, this is a standard Site Certificate condition. This will create a comprehensive stand-alone record of compliance for the WREFI. |
| | GEN-FW-02: Avian protection | Yes | Construct power lines in accordance with Avian Power Line Interaction Committee design standards, and only install permanent meteorological towers that are unguyed. |
| | PRE-FW-01: Confirmation of habitat categories, nests via habitat survey | Yes | Although this is for the pre-construction and construction phases, this is a standard Site Certificate condition necessary to meet the applicable council standard for the Facility Site Certificate and create an independent obligation for WREFI. |
| | PRE-FW-02: Implementation of Wildlife Monitoring and Mitigation Plan | Yes | The WMMP applies to construction/operation phases. This plan will be finalized and approved prior to construction of the WREFI. |
| | PRE-FW-03: Flagging of environmentally sensitive areas | Yes | Although this is for the pre-construction and construction phases, this is a standard Site Certificate condition necessary to meet the applicable council standard for the Facility Site Certificate and create an independent obligation for WREFI. |
| | PRE-FW-04: Approval of Habitat Mitigation Plan | Yes | The HMP applies to construction/operation phases. This plan will be finalized and approved prior to construction of the WREFI. |
| | PRE-FW-05: Approval of Revegetation Plan[1] | Yes | The Revegetation Plan applies to construction/operation phases. This plan will be finalized and approved prior to construction of the WREFI. The condition will be amended to reflect Morrow County only. |
| | CON-FW-01: Cease construction in winter within Mule Deer Winter Range | No | Not applicable. WREFI facilities are not in the Mule Deer Winter Range. |
| | CON-FW-02: Buffer zones for nest sites | Yes | Although this is for the pre-construction and construction phases, this is a standard Site Certificate condition necessary to meet the applicable council standard for the Facility Site Certificate and create an independent obligation for WREFI. |
| | CON-FW-03: Environmental training by professional | Yes | Although this is for the pre-construction and construction phases, this is a standard Site Certificate condition necessary to meet the applicable council standard for the Facility Site Certificate and create an independent obligation for WREFI. |
| | CON-FW-04: Appointment of on-site environmental inspector | Yes | Although this is for the pre-construction and construction phases, this is a standard Site Certificate condition necessary to meet the applicable council standard for the Facility Site Certificate and create an independent obligation for WREFI. |
| OAR 345-022-0070<br>Threatened and Endangered Species | PRE-TE-01: Determination of Washington ground squirrel (WAGS) boundaries | Yes | Although this is for the pre-construction and construction phases, this is a standard Site Certificate condition. This will create a comprehensive stand-alone record of compliance for WREFI. |
| | PRE-TE-02: Implementation of Wildlife Monitoring and Mitigation Plan for WAGS | Yes | The WMMP for WAGS applies to construction/operation phases. This plan will be developed and approved prior to construction of the Facility, but will also apply to WREFI. |
| | PRE-TE-03: Avoidance of Laurent's milkvetch impacts | Yes | Applies to construction/operation phases. |
| OAR 345-022-0080 | GEN-SR-01: Reduction of lighting Facility visual impacts[1] | Yes | The substation and battery storage are a related or supporting Facility that will be shared with WREFI. This condition will be amended to remove the O&M Building. |

| Standard | Site Certificate Conditions | WREFI Site Certificate Condition? | Reason |
|---|---|---|---|
| Scenic Resources | GEN-SR-02: Minimization of visual impacts[1] | Yes | Although this is for the pre-construction and construction phases, this is a standard Site Certificate condition necessary to meet the applicable council standard for the Facility Site Certificate and create an independent obligation for WREFI. This condition will be amended to remove the O&M Building. |
| OAR 345-022-0090<br>Historic, Cultural and Archaeological Resources | PRE-HC-01: Submission of final design | Yes | Although this is for the pre-construction and construction phases, this is a standard Site Certificate condition necessary to meet the applicable council standard for the Facility Site Certificate and create an independent obligation for WREFI. |
| | PRE-HC-02: Marking of buffer areas | Yes | Although this is for the pre-construction, this is a standard Site Certificate condition necessary to meet the applicable council standard for the Facility Site Certificate and create an independent obligation for WREFI. |
| | PRE-HC-03: Training by qualified archeologist | Yes | Although this is for the pre-construction and construction phases, this is a standard Site Certificate condition necessary to meet the applicable council standard for the Facility Site Certificate and create an independent obligation for WREFI. |
| | CON-HC-01: Flagging of 200-foot avoidance buffer | Yes | Although this is for the pre-construction and construction phases, this is a standard Site Certificate condition necessary to meet the applicable council standard for the Facility Site Certificate and create an independent obligation for WREFI. |
| | CON-HC-02: Work cease due to historical find | Yes | Although this is for the pre-construction, immediately prior to construction, and construction phases, this is a standard Site Certificate condition necessary to meet the applicable council standard for the Facility Site Certificate and create an independent obligation for WREFI. |
| OAR 345-022-0100<br>Recreation | N/A | N/A | N/A |
| OAR 345-022-0110<br>Public Services | GEN-PS-01: Coordination with solid waste handler | Yes | This condition applies to WREFI to ensure continual compliance with the Morrow County Solid Waste Ordinance. |
| | GEN-PS-02: Installation of security measures | No | This condition doesn't apply to the substation. The O&M Building is not a related or supporting facility to WREFI. |
| | GEN-PS-03: Fire prevention and response training | Yes | This condition applies to operation phases of a Facility. |
| | GEN-PS-04: 100-foot vegetation free zone around battery storage systems | Yes | WREFI includes battery storage. |
| | PRE-PS-01: Preparation of Traffic Management Plan[1] | Yes | Although this is for the pre-construction phase, this is a standard Site Certificate condition necessary to meet the applicable council standard for the Facility Site Certificate and create an independent obligation for WREFI. A minor text edit is needed to remove reference to Umatilla County. |
| | PRE-PS-02: Road Use Agreements with counties[1] | Yes | The condition will be amended to only reference Morrow County. Although this is for the pre-construction phase, this Site Certificate condition is necessary to meet the applicable council standard for the Facility Site Certificate and create an independent obligation for WREFI. |
| | PRE-PS-03: Access road and private road modification approvals[1] | Yes | Although this is for the pre-construction phase, this Site Certificate condition is necessary to meet the applicable council standard for the Facility Site Certificate and create an independent obligation for WREFI. A minor text edits are needed to remove reference to Umatilla County. |
| | PRE-PS-04: Federal Aviation Administration (FAA) and Oregon Department of Aviation (ODA) aeronautical studies and determinations | Yes | Although this is for the pre-construction phase, this Site Certificate condition is necessary to meet the applicable council standard for the Facility Site Certificate and create an independent obligation for WREFI. |
| | PRE-PS-05: Preparation of Emergency Management Plan | Yes | This condition also applies to operation phases. |
| | PRE-PS-06: Development of health and safety plan | Yes | This condition also applies to operation phases. |
| | PRE-PS-07: Assurance of first aid/CPR/AED personnel | Yes | Although this applies to the pre-construction phase only, this Site Certificate condition is necessary to meet the applicable council standard for the Facility Site Certificate and create an independent obligation for WREFI. |
| | CON-PS-01: Waste management plan protocols | Yes | Although this applies to the construction phase only, it necessary to provide an independent obligation for WREFI. |

| Standard | Site Certificate Conditions | WREFI Site Certificate Condition? | Reason |
|---|---|---|---|
| | CON-PS-02: Establish on-site security[1] | Yes | Although this applies to the construction phase only, this Site Certificate condition is necessary to meet the applicable council standard for the Facility Site Certificate and create an independent obligation for WREFI. This condition will be changed to remove Umatilla County from the condition. |
| | CON-PS-03: Assurance of fall, high angle, confined space trained personnel | Yes | Although this applies to the construction phase only, this Site Certificate condition is necessary to meet the applicable council standard for the Facility Site Certificate and create an independent obligation for WREFI. |
| | CON-PS-04: Usage of concrete pads, nonflammable ground cover | Yes | Although this applies to the construction phase only, this Site Certificate condition is necessary to meet the applicable council standard for the Facility Site Certificate and create an independent obligation for WREFI. |
| | CON-PS-05: Maintenance of non-vegetated area | Yes | Although this applies to the construction phase only, this Site Certificate condition is necessary to meet the applicable council standard for the Facility Site Certificate and create an independent obligation for WREFI. |
| | PRO-PS-01: Fall protection/tower rescue training | Yes | This condition applies to pre-operation phase. This Site Certificate condition is necessary to meet the applicable council standard for the Facility Site Certificate and create an independent obligation for WREFI. |
| | PRO-PS-02: Submission of site plan to fire protection officials | Yes | This condition applies to pre-operation phase. this Site Certificate condition is necessary to meet the applicable council standard for the Facility Site Certificate and create an independent obligation for WREFI. |
| | PRO-PS-03: Assurance of current first aid/CPR/AED personnel | Yes | This condition applies to pre-operation phase. This Site Certificate condition is necessary to meet the applicable council standard for the Facility Site Certificate and create an independent obligation for WREFI. |
| | OPR-PS-01: Discharge of wastewater | No | WREFII will hold all state permits for the O&M Building. |
| | OPR-PS-02: On-site well water usage | No | WREFII will hold all state permits and be responsible for the well log. |
| | OPR-PS-03: Implementation of waste management plan[1] | Yes | This condition applies to pre-operation/operation phases and demonstrates Facility compliance with the Morrow County Solid Waste Management Ordinance. |
| | OPR-PS-04: Current contact information for personnel | Yes | This condition applies to WREFI. |
| OAR 345-022-0120<br>Waste Minimization | PRE-WM-01: Minimum waste management plan requirements | Yes | This condition applies to WREFI. |
| | PRE-WM-02: Confirmation of no surface/ground/drinking water impacts | Yes | This is a pre-construction requirement. |
| | CON-WM-01: Requirements of off-site soil disposal | Yes | Although this applies to the construction phase only, this Site Certificate condition is necessary to meet the applicable council standard for the Facility Site Certificate and create an independent obligation for WREFI. |
| OAR 345-024-0010<br>Public Health and Safety Standards for Wind Energy Facilities | GEN-WF-01: Following handling instructions | Yes | This condition applies to construction/operation phases. |
| | GEN-WF-02: Notification of accidents/failures[1] | Yes | This condition applies to construction/operation phases. It will be amended to only reference Morrow County. |
| | CON-WF-01: Installation of step-up transformers | Yes | Although this applies to the construction phase only, this Site Certificate condition is necessary to meet the applicable council standard for the Facility Site Certificate and create an independent obligation for WREFI. |
| | CON-WF-02: Maintenance of self-monitoring devices | Yes | Applies to pre-operation/operation phases. |
| | OPR-WF-01: Assurance of operation security fencing and gates[1] | Yes | This condition applies to the substation. |
| OAR 345-024-0015<br>Siting Standards for Wind Energy Facilities | N/A | N/A | N/A |
| OAR 345-024-0090<br>Transmission Lines | PRE-TL-01: Oregon Public Utility Commission (OPUC) Safety, Reliability, and Security Division Staff briefing | Yes | Although this applies to the pre-construction phase only, this Site Certificate condition is necessary to meet the applicable council standard for the Facility Site Certificate and create an independent obligation for WREFI. |
| | CON-TL-01: Management of human exposure to electromagnetic fields | Yes | Although this applies to the pre-construction phase only, this Site Certificate condition is necessary to meet the applicable council standard for the Facility Site Certificate and create an independent obligation for WREFI. |
| | OPR-TL-01: Final Facility design operations information provided to OPUC Safety Staff | Yes | Although this applies to the pre-construction phase only, this Site Certificate condition is necessary to meet the applicable council standard for the Facility Site Certificate and create an independent obligation for WREFI. |

| Standard | Site Certificate Conditions | WREFI Site Certificate Condition? | Reason |
|---|---|---|---|
| OAR 340-035-0035<br>Noise | PRE-NC-01: Final Facility design noise analysis and noise waiver if applicable | Yes | Although this is for the pre-construction phase, this is a standard Site Certificate condition. Compliance will be achieved through documentation as part of the first annual report. This will create a comprehensive stand-alone record of compliance for the WREFI. This condition will be amended to remove references to solar. |
| | CON-NC-01: Measure to reduce noise impacts during construction | Yes | Although this applies to the pre-construction phase only, this Site Certificate condition is necessary to meet the applicable council standard for the Facility Site Certificate and create an independent obligation for WREFI. |
| | OPR-NC-01: Noise Reduced Operating mode turbines operating noise level documentation. | Yes | This condition applies to the operation phase. |
| | OPR-NC-02: Certificate Holder to maintain a noise complaint response system | Yes | This condition applies to the operation phase. |
| | OPR-NC-03: Certificate Holder will provide a monitoring plan for noise levels in response to a noise complaint | Yes | This condition applies to the operation phase. |
| Removal-Fill Law | N/A | N/A | N/A |
| Water Rights | N/A | N/A | N/A |
| 1. Conditions requiring minor text changes generally to remove references to battery storage and solar facilities. | | | |

## 3.1 Effect of Proposed Changes on the Facility – OAR 345-027-0060(1)(b)(A)

*OAR 345-027-0060(1)(b)(A) a description of how the proposed change affects the facility,*

The Facility, once split, will be constructed and operated substantially in the same manner as previously approved by the Council, which imposed conditions, as necessary, that considered micrositing needs, potential impacts, and public and reviewing agencies' comments. The partitioned facilities will generally function as one Facility, and the division into WREFI and WREFII would not affect any physical impacts from Facility construction, operation, or retirement. Splitting the Facility and Site Certificate would allow the Certificate Holder to meet their contractual obligations to transfer 100 MW of the wind energy facility to PGE (see Attachment 1), thereby advancing Oregon's clean energy future while delivering affordable electricity for PGE customers.

## 3.2 Applicable Laws and Council Rules – OAR 345-027-0060(1)(b)(B)

*OAR 345-027-0060(1)(b)(B) a description of how the proposed change affects those resources or interests protected by applicable laws and Council standards, and*

The proposed changes do not affect the resources or interests protected by applicable laws and Council standards in a substantially different way than what has already been approved by the Council (Section 6.0). Compliance with applicable laws is integrated into the Site Certificate conditions, including conditions related to pre-construction habitat surveys, noise analysis, setback verification, the National Pollutant Discharge Elimination System 1200-C permit, consultation with the Oregon Department of Fish and Wildlife (ODFW), the Oregon Department of Geology and Mineral Industries, and FAA 7460-1 filings, among others.

The Facility's proposed partition and Site Certificate split does not alter the Certificate Holder's ability to comply with the Site Certificate conditions for the Facility. Sections 4.0 and 6.0 further demonstrate how the proposed changes are consistent with the Council's previous findings. The physical components of the Facility and the Site Boundary will not be changed; therefore, there are no new areas or resources that were not previously evaluated. The Facility, following its partition under this Amendment, will be constructed and operated in substantially the same manner as already approved by the Council.

## 3.3 Location of the Proposed Change – OAR 345-027-0060(1)(b)(C)

*OAR 345-027-0060(1)(b)(C) the specific location of the proposed change, and any updated maps and/or geospatial data layers relevant to the proposed change.*

This request does not seek to change the Site Boundary or physical components of the Facility. Figures 1 and 2 show how the Facility will be divided into WREFI and WREFII.

# 4.0 Division 21 Requirements – OAR 345-027-0060(1)(c)

*OAR 345-027-0060(1)(c) References to any specific Division 21 information that may be required for the Department to make its findings.*

## 4.1 OAR 345-021-0010(1)(e) - Required Permits

Exhibit E of the ASC identified the federal, state, and local government permits related to the siting of the Facility, which were incorporated into Site Certificate conditions as necessary. The proposed division of the Facility into two facilities does not require any new permits, nor any new Site Certificate conditions for permits, which were not previously considered by the Council.

## 4.2 OAR 345-021-0010(1)(f) - Materials Analysis

Construction materials for the partitioned facilities will be the same as those used for construction of the Facility as previously approved by the Council. In general, the division of the Facility into WREFI and WREFII will not change the amount of solid waste and wastewater generated by the Facility, and will not modify the procedures and practices used for handling these materials. The Certificate Holder will continue to comply with Site Certificate conditions related to materials and waste management.

# 5.0 Site Certificate Revisions – OAR 345-027-0060(1)(d)

*OAR 345-027-0060(1)(d) The specific language of the site certificate, including conditions, that the certificate holder proposes to change, add or delete through the amendment.*

A red-lined Site Certificate for each of the partitioned facilities is included as Attachment 2.

# 6.0 Other Standards and Permits – OAR 345-027-0360(1)(e)

*OAR 345-027-0360(1)(e) A list of all Council standards and other laws, including statutes, rules and ordinances, applicable to the proposed change, and an analysis of whether the facility, with the proposed change, would comply with those applicable laws and Council standards. For the purpose of this rule, a law or Council standard is "applicable" if the Council would apply or consider the law or Council standard under OAR 345-027-0375(2).*

Council standards relevant to RFA 5 include Division 22 (General Standards for Siting Facilities) and Division 24 (Specific Standards for Siting Facilities). Division 23, which applies to non-generating facilities, does not apply to wind power-generating facilities. Similarly, inapplicable provisions of Division 24 (e.g., standards applicable to gas plants, gas storage, non-generating facilities) are not discussed.

Ultimately, the Facility will be constructed and operated substantially in the same manner as previously approved by the Council, which imposed conditions, as necessary, that take into consideration micrositing needs and public and reviewing Agency comments. Partitioning the Facility does not change this. As identified in Table 2, the Site Certificate for WREFI will mirror the existing Site Certificate except for conditions or parts of conditions that specifically apply to Umatilla County, or solar and distributed energy storage. Table 3 identifies Council standards and laws reviewed as part of RFA 5, their applicability, and the Site Certificate conditions that govern Facility compliance for each standard. Because there will be a new Site Certificate created by the Facility partition, all standards apply even though there will be no new areas of Site Boundary or new physical components of the Facility. The Facility will continue to comply with all Site Certificate conditions even after partitioning.

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**Table 3. Standards and Laws Relevant to Proposed Amendment**

| Standard | Applicability & Compliance | Related Site Certificate Conditions |
|---|---|---|
| OAR 345-022-0000<br>General Standard of Review | The Council previously found that the Facility complies with the General Standard of Review. For RFA 5, the requirements of OAR 345-022-0000 are addressed in the findings, analysis, and conclusions discussed in Section 6.1.<br>Oregon's Renewable Portfolio Standard establishes a requirement for how much of Oregon's electricity must come from renewable resources like wind. The current RPS is set at 50 percent by 2040. RFA 5 is another step for the Facility to contribute to meeting this requirement. | GEN-GS-01: Commencement of construction<br>GEN-GS-02: Completion of construction<br>GEN-GS-03: Compliance during all phases<br>GEN-GS-04: Permission to construct<br>GEN-GS-05: Notification of environmental impacts<br>GEN-GS-06: Inclusion of representations<br>GEN-GS-07: Vegetation restoration<br>GEN-GS-08: Construct to prioritize human safety<br>GEN-GS-09: Notification of foundation changes<br>GEN-GS-10: Notification of other geological observations<br>GEN-GS-11: Notification of new owners<br>GEN-GS-12: Specification of corridor<br>OPR-GS-01: Submission of legal description |
| OAR 345-022-0010<br>Organizational Expertise | Applicable and complies. The Council has previously determined that NEER has adequate organizational expertise to construct, operate and retire a wind energy facility. There is no proposed change to organizational expertise. The Certificate Holder management team and the NEER family of companies have deep regional expertise, derived over years of successfully permitting and operating hundreds of MWs of wind energy projects in the Oregon. See Section 6.1.1. | GEN-OE-01: Responsibility of non-compliance<br>GEN-OE-02: Report of Site Certificate violations<br>GEN-OE-03: Report of change in corporate structure<br>GEN-OE-04: Compliance with laws for battery disposal & transport<br>PRE-OE-01: Notification of contractor identities<br>PRE-OE-02: Notification of construction manager<br>PRE-OE-03: Compliance of construction workers<br>PRE-OE-04: Notification of non-surveying activities<br>PRE-OE-05: Proof of aggregate source and county permits<br>PRE-OE-06: Proof of third-party approvals and permits |
| OAR 345-022-0020<br>Structural Standard | Applicable and complies. The Council adopted Site Certificate conditions to address the potential for seismic and non-seismic geologic hazards at the Facility site. There will be no changes to the physical components of the Facility that would change findings (see Section 6.1.2). This fifth request for amendment makes no changes that would alter the basis for the Council's earlier findings. RFA 5 does not alter the basis for the Council's prior findings for the structural standard does not alter the Certificate Holder's ability to comply with the Site Certificate conditions. | GEN-SS-01: Compliance with building codes<br>PRE-SS-01: Geological investigation reporting<br>PRE-SS-02: Investigation of active faults<br>PRE-SS-03: Investigation of slope instability<br>PRE-SS-04: Investigation of loess soil |
| OAR 345-022-0022<br>Soil Protection | Applicable and complies. The Council previously found that the Facility would comply with the Soil Protection Standard. There will be no changes to the physical components or disturbance areas of the Facility that would change findings (see Section 6.1.2). This fifth request for amendment makes no changes that would alter the basis for the Council's earlier findings. | PRE-SP-01: Spill Prevention, Control, and Countermeasure construction plans<br>PRE-SP-02: Restoration of agricultural soils<br>PRE-SP-03: Septic system permitting<br>CON-SP-01: Erosion and Sediment Control Plan<br>CON-SP-02: Best management practices to be included in the Erosion and Sediment Control Plan<br>PRO-SP-01: Submission of operational Spill Prevention, Control, and Countermeasure plan<br>OPR-SP-01: Prevention of erosion, soil disturbance |

| Standard | Applicability & Compliance | Related Site Certificate Conditions |
|---|---|---|
| OAR 345-022-0030<br>Land Use | Applicable and complies. RFA 5 would divide the Facility into two separate facilities within the approved Site Boundary. Approval of the amendment would not result in any land use impacts that have not been addressed by the Council; the amendment would not expand the Site Boundary or alter the authorized uses (see Section 6.1.3). Therefore, this fifth request for amendment makes no changes that would alter the basis for the Council's earlier findings under OAR 345-022-0030 that the Land Use Standard is satisfied. | GEN-LU-01: Compliance with county setbacks<br>GEN-LU-02: County road permits and standards<br>GEN-LU-03: Meteorological tower requirements<br>GEN-LU-04: Usage of minimum land area<br>GEN-LU-05: Blending with natural surroundings<br>PRE-LU-01: Obtain local permitting<br>PRE-LU-02: Obtain Conditional Use Permit<br>PRE-LU-03: Preparation of Weed Control Plan<br>PRE-LU-04: Recording of a Covenant Not to Sue for Morrow County<br>PRE-LU-05: Consultation with landowners<br>PRE-LU-06: Identification of construction traffic concerns<br>PRE-LU-08: Installation of gates and signs to private access roads<br>CON-LU-01: Minimization of footprint<br>CON-LU-02: Installation of bird deterring devices<br>CON-LU-03: Installation of underground cable system<br>OPR-LU-01: Submission of as-built surveys for construction phases<br>OPR-LU-02: Restoration of disturbed areas<br>OPR-LU-03: Completion of final retirement plan<br>OPR-LU-04: Preparation of Operating and Facility Maintenance Plan<br>OPR-LU-06: Retirement restoration activities |
| OAR 345-022-0040<br>Protected Areas | Applicable and complies. RFA 5 to divide the Facility into two separate facilities within the approved Site Boundary. Approval of the amendment would not result in any impacts to Protected Areas (see Section 6.1.5). Therefore, this fifth request for amendment makes no changes that would alter the basis for the Council's earlier findings that under OAR 345-022-0040 the Protected Areas Standard is satisfied. | N/A |
| OAR 345-022-0050<br>Retirement and Financial Assurance | Applicable and complies. See Section 6.1.6. The Certificate Holder is still able to restore the site to a useful, nonhazardous condition following permanent cessation of construction or operation of the facilities (see Section 6.1.6). Therefore, this fifth request for amendment makes no changes that would alter the basis for the Council's earlier findings that the OAR 345-022-0050 Retirement and Financial Assurance Standard is satisfied. The cost estimate for the Facility has been split to create a cost estimate for WREFI (See Attachment 4). | GEN-RF-01: Prevention of non-restorable site<br>PRE-RF-01: Letter of credit to restore site to non-hazardous condition<br>PRE-RF-02: Letter of credit naming State as payee<br>OPR-RF-01: Evidence of monthly inspections of battery storage and insurance for high loss catastrophic events<br>RET-RF-01: Compliance with retirement plan<br>RET-RF-02: Retirement of Facility upon cessation of activities |
| OAR 345-022-0060<br>Fish and Wildlife Habitat | Applicable and complies. RFA 5 does not add new areas of Site Boundary therefore all areas have been reviewed and surveyed for fish and wildlife habitat. The Habitat Mitigation Plan and Wildlife Monitoring and Mitigation Plan will be finalized prior to construction for each facility per Conditions PRE-FW-02 and PRE-FW-04 (see Section 6.1.7). Therefore, this fifth request for amendment makes no changes that would alter the basis for the Council's earlier findings that the OAR 345-022-0060 Fish and Wildlife Habitat Standard is satisfied. | GEN-FW-01: Speed limit requirement<br>GEN-FW-02: Avian protection<br>PRE-FW-01: Confirmation of habitat categories, nests via habitat survey<br>PRE-FW-02: Implementation of Wildlife Monitoring and Mitigation Plan<br>PRE-FW-03: Flagging of environmentally sensitive areas<br>PRE-FW-04: Approval of Habitat Mitigation Plan<br>PRE-FW-05: Approval of Revegetation Plan<br>CON-FW-02: Buffer zones for nest sites<br>CON-FW-03: Environmental training by professional<br>CON-FW-04: Appointment of on-site environmental inspector |

| Standard | Applicability & Compliance | Related Site Certificate Conditions |
|---|---|---|
| OAR 345-022-0070<br>Threatened and Endangered Species | Applicable and complies. RFA 5 does not make changes to the Site Boundary or physical components of the Facility. Therefore, impacts to T&E species have already been reviewed and found by Council to be consistent with the relevant standards. The Habitat Mitigation Plan and Wildlife Monitoring and Mitigation Plan will be finalized after final design for each facility per Conditions PRG-FW-02 and PRG-FW-04 (see Section 6.1.8). | PRE-TE-01: Determination of WAGS boundaries<br>PRE-TE-02: Implementation of Wildlife Monitoring and Mitigation Plan for WAGS<br>PRE-TE-03: Avoidance of Laurent's milkvetch impacts |
| OAR 345-022-0080<br>Scenic Resources | Applicable and complies. RFA 5 does not seek to change any of the physical components of the Facility (see Section 6.1.9). Therefore, this fifth request for amendment makes no changes that would alter the basis for the Council's earlier findings that the OAR 345-022-0080 Scenic Resources Standard is satisfied. | GEN-SR-01: Reduction of lighting Facility visual impacts<br>GEN-SR-02: Minimization of visual impacts |
| OAR 345-022-0090<br>Historic, Cultural and Archaeological Resources | Applicable and complies. Surveys were conducted for the Site Boundary and identified resources will be protected per conditions (see Section 6.1.10). Therefore, this fifth request for amendment makes no changes that would alter the basis for the Council's earlier findings that the OAR 345-022-0090 Historic, Cultural and Archaeological Resources is satisfied. | PRE-HC-01: Submission of final design<br>PRE-HC-02: Marking of buffer areas<br>PRE-HC-03: Training by qualified archeologist<br>CON-HC-01: Flagging of 200-foot avoidance buffer<br>CON-HC-02: Work cease due to historical find |
| OAR 345-022-0100<br>Recreation | Applicable and complies. There will be no changes to physical components of the Facility as part of RFA 5 (see Section 6.1.11). Therefore, this fifth request for amendment makes no changes that would alter the basis for the Council's earlier findings that the OAR 345-022-0100 Recreation Standard is satisfied. | N/A |
| OAR 345-022-0110<br>Public Services | Applicable and complies. RFA 5 does not alter the basis for the Council's prior findings for public services and does not alter the Certificate Holder's ability to comply with the Site Certificate conditions (see Section 6.1.12). | GEN-PS-01: Coordination with solid waste handler<br>GEN-PS-02: Installation of security measures<br>GEN-PS-03: Fire prevention and response training<br>GEN-PS-04: 100-foot vegetation free zone around battery storage systems<br>PRE-PS-01: Preparation of Traffic Management Plan<br>PRE-PS-02: Road Use Agreements with counties<br>PRE-PS-03: Access road and private road modification approvals<br>PRE-PS-04: FAA and ODA aeronautical studies and determinations<br>PRE-PS-05: Preparation of Emergency Management Plan<br>PRE-PS-06: Development of health and safety plan<br>PRE-PS-07: Assurance of first aid/CPR/AED personnel<br>CON-PS-01: Waste management plan protocols<br>CON-PS-02: Establish on-site security<br>CON-PS-03: Assurance of fall, high angle, confined space trained personnel<br>CON-PS-04: Usage of concrete pads, nonflammable ground cover<br>CON-PS-05: Maintenance of non-vegetated area<br>PRO-PS-01: Fall protection/tower rescue training<br>PRO-PS-02: Submission of site plan to fire protection officials<br>PRO-PS-03: Assurance of current first aid/CPR/AED personnel<br>OPR-PS-01: Discharge of wastewater<br>OPR-PS-02: On-site well water usage<br>OPR-PS-03: Implementation of waste management plan<br>OPR-PS-04: Current contact information for personnel |

| Standard | Applicability & Compliance | Related Site Certificate Conditions |
|---|---|---|
| OAR 345-022-0120<br>Waste Minimization | Applicable and complies. RFA 5 is not anticipated to increase the amount of solid waste and wastewater generated by the Facility (see Section 6.1.13). Therefore, this fifth request for amendment makes no changes that would alter the basis for the Council's earlier findings that the OAR 345-022-0120 Waste Minimization Standard is satisfied. | PRE-WM-01: Minimum waste management plan requirements<br>PRE-WM-02: Confirmation of no surface/ground/drinking water impacts<br>CON-WM-01: Requirements of off-site soil disposal<br>CON-PS-01: Waste management plan protocols |
| OAR 345-024-0010<br>Public Health and Safety Standards for Wind Energy Facilities | Applicable and complies. NEER family of companies has expertise, derived over years of successfully operating hundreds of MWs of wind energy projects (see Section 6.2.1). RFA 5 does not alter the basis for the Council's prior findings regarding public and safety and does not alter the Certificate Holder's ability to comply with the Site Certificate conditions (see Section 6.2.1). | GEN-WF-01: Following handling instructions<br>GEN-WF-02: Notification of accidents/failures<br>PRE-PS-04: FAA and ODA aeronautical studies and determinations<br>CON-WF-01: Installation of step-up transformers<br>CON-WF-02: Maintenance of self-monitoring devices<br>OPR-WF-01: Assurance of operation security fencing and gates |
| OAR 345-024-0015<br>Siting Standards for Wind Energy Facilities | Applicable and complies. The Facility is being designed to reduce cumulative adverse environmental effects (see Section 6.2.2). RFA 5 does not alter the basis for the Council's prior findings for OAR 345-024-0015 Siting Standards for Wind Energy Facilities and does not alter the Certificate Holder's ability to comply with the Site Certificate conditions (see Section 6.2.2). | N/A |
| OAR 345-024-0090<br>Transmission Lines | Applicable and complies. There will be no changes to the approved 230-kv transmission line as part of RFA 5. | GEN-GS-12: Specification of corridor<br>PRE-TL-01: OPUC Safety, Reliability, and Security Division Staff briefing<br>CON-TL-01: Management of human exposure to electromagnetic fields<br>OPR-TL-01: Final Facility design operations information provided to OPUC Safety Staff |
| OAR 340-035-0035<br>Noise | Applicable and complies. There will be no changes to the physical components of the Facility or Site Boundary (see Section 6.3.1). | PRE-NC-01: Final Facility design noise analysis and noise waiver if applicable<br>CON-NC-01: Measure to reduce noise impacts during construction<br>OPR-NC-01: Noise Reduced Operating mode turbines operating noise level documentation.<br>OPR-NC-02: Certificate Holder to maintain a noise complaint response system<br>OPR-NC-03: Certificate Holder will provide a monitoring plan for noise levels in response to a noise complaint |
| Removal-Fill Law | Applicable and complies. A removal-fill permit is not needed for the Facility because the Facility will not temporarily or permanently impact waters of the state (see Section 6.3.2). | N/A |
| Water Rights | Applicable and complies. There will be the same water volumes and sources as previously approved by Council for use during construction and operation of the Facility. (see Section 6.3.3). | N/A |

## 6.1 Applicable Division 22 Standards

### *6.1.1 Organizational Expertise - OAR 345-022-0010*

The Certificate Holder's information, including contact information, is included in Section 2.0. The Certificate Holder is a wholly-owned indirect subsidiary of NEER. The full name and address of NEER is provided in Section 2.0.

Third party permits have been and will be obtained by the construction firm selected to build the Facility. The Certificate Holder anticipates that these third-party permits may include permits for obtaining aggregate and other construction materials, transporting materials to the site, and other building-related permits that are typically obtained immediately prior to construction activities.

Currently, the Certificate Holder is Wheatridge Wind Energy, LLC. When the Site Certificate was originally issued, the Certificate Holder was Swaggart Wind Power, LLC. In the Final Order for transfer of ownership included in RFA 1, the Certificate Holder relied upon the organizational expertise and financial assurance of its new parent company, NEER, to demonstrate compliance with the applicable Council standards. The Council previously found that NEER has "the ability to design, construct, and operate the Facility in a manner that protects public health and safety," subject to Site Certificate conditions Organizational Expertise 1-6 and 9[6].

The proposed division of the Facility into WREFI and WREFII does not affect the Certificate Holder's organizational expertise. The Certificate Holder will retain ownership of WREFI and WREFII and still be subject to the requirements of the Site Certificate conditions applicable to the organizational expertise standard (see Tables 2 and 3). Based upon compliance with these existing conditions, the Council can find that the Certificate Holder has the ability to access resources or services provided by the third-party permit. Although WREFI will be transferred to PGE at a later date, the facility ownership transfer is not part of this amendment request. There are no circumstances that would alter the basis for the Council's earlier findings. Therefore, Council may rely on its previous findings that the Certificate Holder continues to have the organizational expertise to construct, operate, and retire the facilities (WREFI and WREFII) in compliance with Council standards and Site Certificate conditions.

### *6.1.2 Structural Standard - OAR 345-022-0020*

The Council previously found that the Facility complies with the Structural Standard. The Structural Standard generally requires the Council to evaluate whether the Certificate Holder has adequately characterized the potential seismic, geological, and soil hazards within the Site Boundary, and that the Certificate Holder can design, engineer, and construct the Facility to avoid dangers to human safety from these hazards. The Certificate Holder provided information regarding the seismic characteristics within the Site Boundary, as well as an assessment of seismic and geologic hazards and other requirements of the Structural Standard in Exhibit H of the ASC, as well as RFA 2 and RFA

[6] Final Order on Request for Transfer, July 27, 2017.

3. RFA 5 does not seek to enlarge the existing Site Boundary or physical components of the Facility, and there is no change to the previously approved facilities from what was originally authorized for the Facility. RFA 5 seeks to divide the Facility into two separate facilities within the approved Site Boundary. Therefore, RFA 5 would not result in the placement of Facility components within geologic areas that have not been addressed by the Council.

The proposed change does not affect the Certificate Holder's ability to design, engineer, and construct the Facility to avoid dangers to human safety and the environment that are presented by seismic hazards affecting the Site Boundary. Best management practices will continue to be implemented for WREFI and WREFII through the National Pollutant Discharge Elimination System 1200-C permit and the Emergency Action Plan, which will be updated annually in case an emergency event does occur. The Council previously adopted five Site Certificate conditions to address the potential for seismic and non-seismic geologic hazards at the Facility; all conditions or portions of conditions are applicable to both facilities (as listed in Table 2). The proposed division of the Facility does not change the Facility's compliance with OAR 345-022-0020 or any structural conditions (see Tables 2 and 3) in the Site Certificate. Therefore, the Council may rely on its previous findings that this amendment request also complies with OAR 345-022-0020.

### *6.1.3 Soil Protection - OAR 345-022-0022*

The Council previously found that the Facility complies with the Soil Protection Standard. The Soil Protection Standard requires the Council to find that, after taking mitigation into account, the design, construction, and operation of a facility will not likely result in a significant adverse impact to soils. RFA 5 makes no changes that alter the basis for the Council's earlier findings. RFA 5 does not seek to enlarge the existing Site Boundary or physical components of the Facility, and there is no change to the previously approved facilities from what was previously approved for the Facility.

The Certificate Holder will implement erosion control measures and an operational Spill Prevention Control and Countermeasures plan, as presented in Exhibit I of the ASC. In addition, the Certificate Holder will comply with applicable existing conditions for soil protection, as identified in Table 2. The Council can find that the design, construction, and operation of WREFI and WREFII would not likely result in significant adverse impacts to soils, taking into account the mitigation required by the Site Certificate conditions. Therefore, the Council may rely on its prior findings, and conclude that RFA 5 also complies with OAR 345-022-0022.

### *6.1.4 Land Use - OAR 345-022-0030*

The Council previously concluded that the Facility complies with the Land Use Standard. RFA 5 does not seek to enlarge the existing Site Boundary, extend construction deadlines, or change physical components of the Facility, and there is no change to the previously approved facilities (turbine types and sizes, maximum number of turbines, generating capacity, etc.) from what was authorized in the ASC and subsequent RFAs. As such, the proposed amendment makes no changes that would alter the basis for the Council's earlier findings under OAR 345-022-0030.

The Facility must still comply with Land Use Conditions previously imposed on the Facility, as listed in Table 2. There will be no substantive changes to the conditions for WREFII. For WREFI, proposed condition edits are mainly to reflect the location of WREFI, which is only within Morrow County, not Morrow and Umatilla counties and to eliminate references to or conditions specific to the O&M Building and solar. Based on these findings, the Council may conclude that the proposed changes in RFA 5 comply with the Council's Land Use Standard.

### *6.1.5 Protected Areas - OAR 345-022-0040*

The Council previously concluded that the Facility complies with the Protected Areas Standard. The Protected Areas Standard requires the Council to find that, taking into account mitigation, the design, construction, and operation of a facility are not likely to result in significant adverse impacts to any protected area as defined by OAR 345-022-0040. There are 16 defined protected areas within the analysis area. Based on the Certificate Holder's review, there are no new protected areas located within the analysis area.

The Council previously found that while Facility components will result in a change to the existing viewshed of the protected areas, the visual impacts of construction and operation of the Facility will not likely result in a significant adverse impact to any protected area due to the low impact to users, lack of specified management of scenic or visual qualities (or designated views or viewsheds), and the presence of similar structures within the existing viewshed. RFA 5 does not seek to enlarge the existing Site Boundary, and there are no proposed changes to the previously approved facilities or resources used during construction, such as water or construction resources. Therefore RFA 5 makes no changes that alter the basis for the Council's earlier findings. Therefore, the proposed division of the Facility into WREFI and WREFII does not alter the basis for the Council's prior findings that the Facility complies with the Protected Areas Standard.

### *6.1.6 Retirement and Financial Assurance - OAR 345-022-0050*

The Council previously found that the Certificate Holder is able to restore the site to a useful, nonhazardous condition following permanent cessation of construction or operation of the Facility,

The Certificate Holder has provided a cost estimate for WREFI (See Attachment 4). The cost estimate reflects decommissioning of WREFI including a decommissioning cost portion of the shared facilities and reflects the WREFI portion of the cost estimate provided for pre-construction compliance for Wheatridge West. Based on the cost estimate, the WREFI restoration cost is estimated at approximately $3,351,000. This amount will be reflected in Condition PRE-RF-02 for WREFI and deducted from the $19.5 million for WREFII in Condition PRE-RF-02.

The Council previously imposed two conditions to ensure the Certificate Holder could meet its financial assurance obligations and ensure the adequacy of the bond or letter once design has been finalized prior to construction. To comply with Condition PRE-RF-02, the Certificate Holder provided an updated financial retirement analysis as part of pre-construction compliance for WREFI and WREFII. To comply with Condition PRE-RF-01, the Certificate Holder also submitted a

bond or letter of credit sufficient to ensure restoration of the site to a useful, nonhazardous condition for WREFI and WREFII. Additionally, the Certificate Holder has demonstrated a reasonable likelihood of obtaining a bond or letter of credit as part of RFA 4 for up to $60,000,000 (see Attachment 5).

Because a bond was provided for Wheatridge West wind as part of pre-construction, there are existing conditions requiring recalculation of the retirement cost and confirmation of adequate bonding after final design for the remainder of the facilities, and no change in the approved facilities is requested in RFA 5, there is no reason to submit an updated letter from Scotiabank as part of this RFA. Accordingly, RFA 5 makes no changes that alter the basis for the Council's earlier findings; therefore, the Council may find that OAR 345-022-0050 is met.

### *6.1.7 Fish and Wildlife Habitat - OAR 345-022-0060*

As noted in the Final Order on the Site Certificate, the Council's Fish and Wildlife Habitat Standard requires the Council to find that the design, construction, and operation of a facility is consistent with ODFW's habitat mitigation goals and standards, as set forth in OAR 635-415-0025. This rule creates requirements for mitigating impacts to fish and wildlife habitat, based on the functional quantity and quality of the habitat impacted, as well as the nature, extent, and duration of the impact. The Council previously found that the Facility complies with the Fish and Wildlife Habitat Standard.

RFA 5 seeks to divide the Facility into two separate facilities within the approved Site Boundary. Approval of the amendment would not result in any impacts to Fish and Wildlife habitat that have not previously been addressed by the Council. In order to mitigate for impacts to wildlife habitat, the Certificate Holder will implement a Habitat Mitigation Plan. The final Habitat Mitigation Plan includes confirmation of habitat categories in consultation with ODFW (and subject to approval by ODOE), and final mathematical calculation of impact acreages to determine the habitat mitigation acreage based upon an approved calculation methodology (see Table 2 for associated conditions) for the Facility. Further, the Site Certificate requires the Wildlife Monitoring and Mitigation Plan, the Habitat Mitigation Plan, and the Revegetation Plan as conditions of approval, as well as several ongoing studies during Facility operation. The Certificate Holder has provided each of the plans identified above for each Site Certificate (WREFI and WREFII) in Attachment 6. Although each plan has been modified as necessary to reflect the individual facility, the protocols and methodology are those that were approved by ODOE and ODFW as part of pre-construction compliance.

All previously imposed Council conditions for fish and wildlife habitat apply to RFA 5 (Table 2). There will be no changes to the conditions, and the proposed change does not affect the Certificate Holder's ability to comply with any of the other previously imposed site conditions for fish and wildlife habitat (Table 2). RFA 5 would not alter the basis for the Council's previous findings. Therefore, for the reasons discussed above and subject to the Site Certificate conditions, the Council can find that the proposed division of the Facility into WREFI and WREFII complies with the Council's Fish and Wildlife Standard.

### *6.1.8 Threatened and Endangered Species - OAR 345-022-0070*

The Council previously found the Certificate Holder has demonstrated an ability to construct, operate, and retire the Facility in compliance with Council standards and conditions of the Site Certificate, including the Threatened and Endangered Species Standard (OAR 345-022-0070). The Certificate Holders' assessment of the Facility's compliance with the Threatened and Endangered Species Standard was included as Exhibit Q of the ASC, and included surveys for threatened and endangered species within the Site Boundary. As described in Exhibit Q, the Certificate Holder proposed a number of mitigation measures to reduce the potential impact to WAGS and their habitat. These measures include siting the Facility on developed habitat when possible, particularly dryland wheat fields, conducting pre-construction surveys to confirm and avoid Category 1 habitat during micrositing and construction (Condition PRE-FW-01), and implementing a Wildlife Monitoring and Mitigation Plan (Condition PRE-FW-02). Because RFA 5 does not propose changes to the physical components of the Facility or Site Boundary, and both WREFI and WREFII are subject to compliance with the applicable Site Certificate conditions as identified in Table 2, the Council can find that the division of the Facility into WREFI and WREFII complies with the Council's Threatened and Endangered Species Standard.

### *6.1.9 Scenic Resources - OAR 345-022-0080*

OAR 345-022-0080 requires the Council to determine that the design, construction, and operation of the proposed Facility will not have a "significant adverse impact" to any significant or important scenic resources and values in the analysis area. The Council previously concluded that the Facility complies with the Scenic Resources Standard. RFA 5 does not seek to enlarge the existing Site Boundary, or request changes to the physical components of the Facility. All previously imposed Council conditions for scenic resources apply to RFA 5 (see Table 2).

Based on the Certificate Holder's review of applicable land use plans, there are no new significant or important scenic resources within the analysis area. Because RFA 5 does not seek to change the existing Site Boundary, physical components, or any previously approved facilities, this same finding can be applied. As previously determined, because there is no management direction for preservation of views or scenic quality at any of the key observation point locations, taking into account the previously imposed Site Certificate conditions, the Council can find that the Facility, as partitioned into WREFI and WREFII, will not likely to result in significant, adverse impacts to scenic and aesthetic values identified as significant or important in applicable management plans or in local land use plans in the analysis area.

### *6.1.10 Historical, Cultural and Archaeological Resources - OAR 345-022-0090*

RFA 5 seeks to divide the Facility into two separate facilities within the approved Site Boundary, and would not result in placement of Facility components within areas that were not previously addressed by the Council. The requested amendment seeks no change that would affect the

Council's previous findings and conditions imposed on the Facility in regard to historical, cultural and archaeological resources.

Both WREFI and WREFII facilities will comply with the conditions imposed by Council. Therefore, the division of the Facility proposed in RFA 5 does not alter the basis for the Council's prior finding that the standard for historic, cultural, and archaeological resources has been met.

### *6.1.11 Recreation - OAR 345-022-0100*

The Recreation Standard requires the Council to find that the design, construction, and operation of a facility will not likely result in significant, adverse impacts to important recreational opportunities. Therefore, the Council's Recreation Standard applies to only those recreation areas that the Council deems important. The Council previously found that the Facility will not result in direct or indirect loss of any of the recreational opportunities identified as important. RFA 5 does not seek to enlarge the existing Site Boundary or physical components of the Facility and there is no change to the previously approved facilities from what was authorized in the ASC and subsequent amendments. Therefore, the change proposed in RFA 5 does not alter the basis of the previous finding for recreation areas; the Council can find that dividing the Facility into WREFI and WREFII complies with the Council's Recreation Standard.

### *6.1.12 Public Services - OAR 345-022-0110*

The Council's Public Services Standard requires the identification of likely, significant, adverse impacts caused by the Facility on the ability of public and private service providers to supply sewer and sewage treatment, water, stormwater drainage, solid waste management, housing, traffic safety, police and fire protection, health care, and schools. All of the previously imposed Council conditions for public services apply to both WREFI and WREFII (see Table 2). There will be no changes to the conditions based on the division of the Facility into WREFI and WREFII.

The division of the Facility into WREFI and WREFII does not affect any aspect of the analysis conducted to support issuance of the Site Certificate. The previously evaluated peak number of workers needed during construction will continue to represent a worst-case scenario related to impacts to public services. RFA 5 makes no changes to the Facility structures or configuration, and there are no other circumstances that would alter the basis for the Council's earlier determination. Therefore, the proposed change does not affect the Council's previous findings on public services. The Council adopted Site Certificate conditions to address Public Services. and the Certificate Holder can comply with all Site Certificate conditions previously adopted by the Council for the Facility. Based upon the findings above, the Council can conclude that dividing the Facility into WREFI and WREFII complies with the Council's Public Services Standard.

### *6.1.13 Waste Minimization - OAR 345-022-0120*

The Council adopted Site Certificate conditions to address the Waste Minimization Standard. All previously imposed Council conditions for waste minimization apply to RFA 5. There will be no

changes to the conditions due to the division of the Facility into WREFI and WREFII. The Facility will continue to adhere to requirements imposed by the Morrow County Solid Waste Management Ordinance, specifically those applicable to post-construction phases, including covering and securing of waste products hauled during operations. There are no new types of solid waste that will be generated from the operation of the Facility that were not previously reviewed by the Council for the Facility. RFA 5 does not seek to enlarge the existing Site Boundary or physical components of the Facility, and there is no change to the previously approved facilities from what is authorized in the Site Certificate. Therefore, the Facility division proposed in RFA 5 does not alter the basis for the Council's prior finding that the Waste Management Standard has been met.

## 6.2 Applicable Division 24 Standards

### *6.2.1 Public Health and Safety Standards for Wind Energy Facilities - OAR 345-024-0010*

The Council previously found that the Facility complies with the Public Health and Safety Standards for Wind Energy Facilities. There is no change to the previously approved Site Boundary or facilities from what is authorized in Site Certificate. The Facility will remain located entirely on private property, which will restrict public access to turbines and other Facility components. The Certificate Holder will comply with the existing conditions for public health and safety, as identified in Table 2. There will be no substantive changes to the conditions due to the division of the Facility into WREFI and WREFII.

During construction and operation, the Certificate Holder shall follow the manufacturers' recommended handling instructions and procedures to prevent damage to turbine or turbine tower components. WREFI and WREFII will also be equipped with SCADA systems that will allow for remote control and monitoring of individual turbines and the wind facility as a whole from both the central host computer, or from a remote computer to shut down turbines if abnormal levels of vibration or other issues are detected. Documentation demonstrating the Facility's operational safety-monitoring program and cause analysis program will be submitted to ODOE for review and approval. The Certificate Holder shall document maintenance activities and will submit these documents to ODOE pursuant to OAR 345-026-0080 in the Facility's annual compliance report.

The changes described in RFA 5 will not alter the basis for the Council's earlier findings, nor change the Certificate Holder's ability to comply with any requirements and conditions issued by the Council regarding public health and safety (See Table 2). Therefore, the Council may find that OAR 345-024-0010 is satisfied.

### *6.2.2 Siting Standards for Wind Energy Facilities - OAR 345-024-0015*

As described above, there will be no changes to visual impacts on protected areas or public viewing areas as a result of the changes proposed in RFA 5. RFA 5 does not seek to enlarge the existing Site Boundary or physical components of the Facility and there is no change to the previously approved

facilities from what was authorized in the ASC and subsequent RFAs. The proposed changes will not affect impacts to wetlands or other waters of the state. There are no Facility previously imposed Council conditions that are applicable to Siting Standards for Wind Energy Facilities. Therefore, RFA 5 makes no changes that would alter the basis for the Council's earlier findings that OAR 345-024-0015 is met.

## 6.3 Other Standards and Laws

### *6.3.1 Noise Control Regulations - OAR 340-035-0035*

The Certificate Holder addressed compliance with the Oregon Department of Environmental Quality noise regulations in Exhibit X of the ASC.

There will be no changes to the conditions based on the division of the Facility into WREFI and WREFII. The Site Certificate conditions were developed in consideration of micrositing which allows for flexibility in turbine selection and turbine placement. The Council previously imposed Site Certificate Condition PRE-NC-01, which requires that the final design locations, sound power levels, noise analysis, and noise easements be provided to the ODOE to demonstrate that the Facility complies with the Oregon Department of Environmental Quality's noise control standards in OAR 340-035-0035. The Certificate Holder fulfilled PRE-NC-01 as part of pre-construction for Wheatridge West. RFA 5 does not propose changes that would warrant additional noise modeling. For the reasons discussed above and subject to the conditions in the Site Certificate, the Council can find that WREFI and WREFII will comply with the applicable noise control regulations.

### *6.3.2 Removal-Fill Law*

The Oregon Removal-Fill Law (ORS 196.795 through ORS 196.990) and Oregon Department of State Lands regulations (OAR 141-085- 0500 through OAR 141-085-0785) require a removal-fill permit if 50 cubic yards or more of material is removed, filled, or altered within any "waters of the state." A removal-fill permit will not be needed for the Facility because the Facility, including with the proposed change, will not temporarily or permanently impact waters of the state such that a removal-fill permit is required. There are no previously imposed Council conditions that are applicable to the removal-fill law. The proposed division of the Facility does not seek to enlarge the existing Site Boundary or physical components of the Facility. There is no change to the previously approved facilities from what is authorized in the Site Certificate. Therefore, the proposed change in RFA 5 does not alter the prior analysis and the Council can find that RFA 5 would not affect any "waters of the state."

### *6.3.3 Water Rights*

Under ORS Chapters 537 and 540 and OAR Chapter 690, the Oregon Water Resources Department administers the appropriation of water rights and regulates the use of the water resources of the

state. The proposed division of the Facility into WREFI and WREFII does not change construction or operation water usage or sources approved for use at the Facility. The Council can conclude that dividing the Facility into WREFI and WREFII complies with the applicable regulations pertaining to water rights.

# 7.0 Request to Transfer Site Certificate – OAR 345-027-0400

*(1) For the purpose of this rule:*

*(a) A request for amendment to a site certificate to transfer the site certificate is required for a transaction that results in a change in the ownership, possession or control of the facility or the certificate holder.*

This request is solely a transfer of the LLC; i.e., the certificate holder for the portion of the Facility consisting of WREFII. The ownership, possession or control of the Facility will remain the same as existing, with NEER.

*(b) "New owner" means the person or entity that will gain ownership, possession or control of the facility or the certificate holder.*

As noted above, the "new owner" will remain the same (NEER); but the certificate holder for WREFII will be changed from Wheatridge Wind Energy, LLC to Wheatridge Wind II, LLC.

*(2) When the certificate holder has knowledge that a transaction that requires a transfer of the site certificate as described in section (1)(a) of this rule is or may be pending, the certificate holder must notify the Department. In the notice, the certificate holder must include the name and contact information of the new owner, and the date of the transfer of ownership. If possible, the certificate holder must notify the Department at least 60 days before the date of the transfer of ownership.*

The transfer of ownership cannot occur until the Facility is split into WREFI and WREFII. Therefore, this request serves as notification to ODOE. The name and contact information for the new certificate holder is provided below. The transfer of ownership will become effective the date that the Site Certificate for WREFII becomes effective, which is at least 60 days from the submittal of this request.

*(3) A transaction that would require a transfer of the site certificate as described in subsection (1)(a) of this rule does not terminate the transferor's duties and obligations under the site certificate until the Council approves a request for amendment to transfer the site certificate and issues an amended site certificate. The new owner may not construct or operate the facility until an amended site certificate as described in section (10) of this rule or a temporary amended site certificate as described in section (11) of this rule becomes effective.*

The ownership, possession, and control of WREFII will remain the same as existing, with NEER. The Facility is currently in construction. It is anticipated that WREFII will still be under construction at the time an amended Site Certificate is issued. However, because the ownership of WREFII will

remain the same, and just the change in certificate holder is being requested, a temporary amended Site Certificate is not requested nor necessary.

*(4) To request an amendment to transfer the site certificate, the new owner must submit a written request to the Department that includes the information described in OAR 345-021-0010(1)(a), (d), (f) and (m), a certification that the new owner agrees to abide by all terms and conditions of the site certificate currently in effect and, if known, the expected date of the transaction. If applicable, the new owner must include in the request the information described in OAR 345-021-0010(1)(y)(O)(iv).*

The ownership, possession, and control of WREFII will remain the same as existing, with NEER. The information described in OAR 345-021-0010(1)(a)(d)(f)(m) is provided below. The information described in OAR 345-021-0010(1)(y)(O)(iv) is not applicable.

*OAR 345-021-0010(1)(a) Information about the applicant and participating persons, including:*

*OAR 345-021-0010(1)(a)(A) - Applicant Contact Information*

**Name and mailing address of Applicant:**

Matt Handel
NextEra Energy Resources, LLC
FEW/JB
700 Universe Blvd
Juno Beach, FL 33408

**Contact Persons other than Applicant:**

David Lawlor
NextEra Energy Resources, LLC
FEW/JB
700 Universe Blvd.
Juno Beach, FL 33408

Mike Pappalardo
Environmental Manager
NextEra Energy Resources, LLC
JES/JB
700 Universe Blvd
Juno Beach, FL 33408

Mike.Pappalardo@nexteraenergy.com
(541) 206-1005

*OAR 345-021-0010(1)(a)(B) - Other Participants*

No other participants are anticipated at this time, with the exception of potential third-party permits that have been obtained by the construction firm selected to build Wheatridge West and potential third-party permits for build-out of Wheatridge East and the solar facility. These third-party permits include permits for obtaining aggregate and other construction materials, transporting materials to the site, and other building-related permits that are typically obtained immediately prior to construction activities. As confirmed through pre-construction Site Certificate compliance, these permits meet the facility standards adopted by the Council.

*OAR 345-021- 0010(1)(a)(H) - Limited Liability Company Information*

Wheatridge Wind II, LLC, a Delaware limited liability company, was recently created by NEER as a wholly-owned, indirect subsidiary of NEER. The articles of incorporation are provided in Attachment 7. Proof of registration to do business in Oregon is provided in Attachment 8. The cover letter accompanying this amendment request serves as a written consent for filing this application.

*OAR 345-021-0010(1)(a)(C) through (F) – Other Affiliations*

Wheatridge Wind II, LLC, is a wholly-owned, indirect subsidiary of NEER. The full name and address of NEER is provided above.

*(5) The Department may require the new owner to submit a written statement from the current certificate holder, or a certified copy of an order or judgment of a court of competent jurisdiction, verifying the new owner's right, subject to the provisions of ORS Chapter 469 and the rules of this chapter, to possession or control of the site or the facility.*

The ownership, possession and control of WREFII will remain the same as existing, with NEER. Therefore, it is anticipated this written statement will not be requested from ODOE, but will be available if requested.

*OAR 345-021-0010(1)(d) - Information about the organizational expertise of the applicant to construct and operate the proposed facility, providing evidence to support a finding by the Council as required by OAR 345-022-0010, including:*

The Council previously found the Certificate Holder has demonstrated an ability to construct, operate, and retire the Facility in compliance with Council standards and conditions of the Site Certificate as reviewed during RFA 1[7], RFA 2[8], RFA 3[9], and RFA 4[10]. The applicant is a wholly-owned, indirect subsidiary of NEER. NEER is headquartered in Juno Beach, Florida, and is the world's largest generator of wind and solar renewable energy. NEER is a regionally diversified company with approximately 5,100 employees dedicated to the production of approximately

[7] Final Order on Request for Transfer for the Wheatridge Wind Energy Facility, 2017.
[8] Final Order Request for Amendment 2 to the Site Certificate for the Wheatridge Wind Energy Facility, 2018.
[9] Final Order on Request for Amendment 3 to the Site Certificate for the Wheatridge Wind Energy Facility, 2018.
[10] Final Order on Request for Amendment 4 to the Site Certificate for the Wheatridge Wind Energy Facility, 2019.

21,000 MWs, from 175 facilities in 36 states and four Canadian provinces. With more than 10,000 wind turbines in its fleet, NEER's wind generation capacity totals more than 15,000 MWs. NEER is also capable of generating more than 2,100 MWs of electricity from natural gas facilities, operates three nuclear power plants with a capacity of more than 2,700 MWs, and operates more than 3,000 MWs of solar energy. It is estimated that nearly 95 percent of the electricity produced by NEER comes from clean or renewable sources.

Along with its rate-regulated sister company, Florida Power and Light, NEER is a wholly-owned subsidiary of NextEra Energy, Inc. (NYSE NEE). NextEra Energy, Inc. is a Fortune 150 Company with a market capitalization of approximately 134 billion dollars. The financial strength of NEER and its parent company provides the company with the financial capital to self-finance and build up to 4 billion dollars of projects per year on its own balance sheet.

Within Oregon, NEER subsidiaries (FPL Vansycle, LLC and FPL Energy Stateline II) constructed, and now own and operate, 186 turbines, with a total peak generating capacity of 123 MW at the Stateline 1 and 2 wind energy facilities, and 43 turbines with a total peak generating capacity of 99 MW at the Stateline 3 Wind Energy Facility. FPL Vansycle, LLC and FPL Energy Stateline II were permitted through the Council process, and were issued a Site Certificate with amendments under the name Stateline Wind Project.

Through this relationship, the applicant's management team and the NEER family of companies have deep regional expertise, derived over years of successfully permitting and operating hundreds of MWs of wind energy projects in the Oregon. NEER employees have deep local ties to the communities we operate in, and a solid history of understanding local economic development, permitting, environmental concerns and compliance with the various conditions stipulated within a Council Site Certificate. There are no recorded citations, nor North American Energy Reliability Corporation violations, for these projects.

There are no circumstances that would alter the basis for the Council's earlier findings regarding NEER's organizational expertise. Therefore, Council may rely on its previous findings that NEER continues to have the organizational expertise to construct, operate, and retire WREFII in compliance with Council standards and Site Certificate conditions.

> *OAR 345-021-0010(1)(d) A list of the names and mailing addresses of property owners, as described in this subsection:*
>
> > *(A) The list must include all owners of record, as shown on the most recent property tax assessment roll, of property located:*
> >
> > > *(iii) Within 500 feet of the property which is the subject of the application, where the property is within a farm or forest zone;*

The property owner list is provided in Attachment 9.

> *OAR 345-021-0010(1)(m) Information about the applicant's financial capability, providing evidence to support a finding by the Council as required by OAR 345-022-0050(2). Nothing in*

*this subsection requires the disclosure of information or records protected from public disclosure by any provision of state or federal law. The applicant must include:*

*(A) An opinion or opinions from legal counsel stating that, to counsel's best knowledge, the applicant has the legal authority to construct and operate the facility without violating its bond indenture provisions, articles of incorporation, common stock covenants, or similar agreements;*

Attachment 10 is an opinion from NEER's in-house legal counsel, indicating that Wheatridge Wind II, LLC has the legal authority to construct and operate WREFII without violating its articles of incorporation or similar agreements.

*(B) The type and amount of the applicant's proposed bond or letter of credit to meet the requirements of OAR 345-022-0050; and*

As part of pre-construction compliance for Wheatridge West, Wheatridge Wind Energy, LLC submitted a bond in the amount of $10,410,000. As noted in Section 6.1.6, splitting the retirement cost estimate for the split facility resulted in a $3,351,000 retirement cost for WREFI (Wheatridge Wind Energy, LLC) and approximately $7,059,000 for WREFII (Wheatridge Wind II, LLC). Prior to beginning construction of other approved facilities, bond(s), or letter(s) of credit to the State of Oregon in an amount equal to the net costs of the facility retirement will be provided as calculated for final design. The bond(s) or letter(s) of credit will be provided in an approved form and will ensure that adequate funds exist for the retirement of the facilities constructed and for restoration of the site to a useful, non-hazardous condition. The bond(s) or letter(s) of credit will be adjusted annually for inflation according to the Gross Domestic Product Implicit Price Deflator Index.

*(C) Evidence that the applicant has a reasonable likelihood of obtaining the proposed bond or letter of credit in the amount proposed in paragraph (B), before beginning construction of the facility.*

The Council previously found that the Certificate Holder has a reasonable likelihood of obtaining a bond or letter of credit in an amount necessary to retire and restore the site, originally calculated at $18.1 million (third-quarter 2015 dollars; ODOE 2017a)[11]. To reflect the modified and updated retirement cost estimate detailed in Exhibit W of $27.224 million for RFA 4 (fourth-quarter 2018 dollars) for the Facility, the Certificate Holder obtained a letter from one of the company's relationship banks (RFA 4, Attachment M-1) demonstrating the reasonable likelihood that they will be able to obtain a bond(s) in an amount equal to or greater than the cost of Facility retirement, $60,000,000. NEER has already posted bond for Wheatridge West as outlined above and provided a letter demonstrating the reasonable likelihood that they will be able to obtain a bond(s) in an amount equal to or greater than the cost of Facility retirement.

[11] p. 168

# 8.0 Property Owners Located within or Adjacent to the Site of the Facility – OAR 345-027-0360(1)(f)

The property owner list is provided in Attachment 9.

# 9.0 Conclusion

For the reasons stated above, the Certificate Holder respectfully requests approval of RFA 5.

# Figures

# Wheatridge Renewable Energy Facility I & Wheatridge Renewable Energy Facility II

## Figure 1
## Site Boundaries Detail

**MORROW COUNTY, OR**

- Wheatridge Renewable Energy Facility I Site Boundary
- Wheatridge Renewable Energy Facility II Site Boundary
- Site Boundary Overlap
- State Highway
- Local Road
- County Boundary

TETRA TECH

NEXTera ENERGY RESOURCES

Reference Map


1:45,000 WGS 1984 UTM Zone 11N

0 0.5 1 2 3 4 Miles

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**Wheatridge Renewable Energy Facility I**

**Figure 1.1**
**Site Boundary**

**MORROW COUNTY, OR**

- Wheatridge Renewable Energy Facility I Site Boundary
- Site Boundary Overlap with Wheatridge Renewable Energy Facility II
- State Highway
- Local Road
- County Boundary

TETRA TECH

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Reference Map


1:40,000 WGS 1984 UTM Zone 11N

0 0.5 1 2 3 4 Miles

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# Wheatridge Renewable Energy Facility II

## Figure 1.2
## Site Boundary

**MORROW AND UMATILLA COUNTIES, OR**

- Wheatridge Renewable Energy Facility II
- Site Boundary Overlap with Wheatridge Renewable Energy Facility I
- State Highway
- County Boundary

Umatilla County
Morrow County

207
74
74, 207

SAND HOLLOW
STRAWBERRY CANYON
BLACKHORSE CANYON
NEWMAN CANYON
BUTTERMILK CANYON
DRY AYERS CANYON
MATLOCK CANYON
Butter Creek
Little Butter Creek
Lexington Airport
Lexington

1:132,000 WGS 1984 UTM Zone 11N

0 0.5 1 2 3 4 Miles

TETRA TECH

NEXTera ENERGY RESOURCES

Reference Map


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# Wheatridge Renewable Energy Facility I & Wheatridge Renewable Energy Facility II

## Figure 2
## Site Boundaries & Facilities

**MORROW AND UMATILLA COUNTIES, OR**

Figure 2.1
Figure 2.2
Figure 2.3
Figure 2.4
Figure 2.5
Figure 2.6
Figure 2.7
Figure 2.8

Umatilla County
Morrow County

- Wheatridge Renewable Energy Facility I Site Boundary
- Wheatridge Renewable Energy Facility II Site Boundary
- Site Boundary Overlap
- Map Grid
- Substation & Battery Storage
- O&M Facility
- State Highway
- County Boundary

**Wheatridge Renewable Energy Facility I Wind Layout**

- Turbine
- Met Tower
- Center Line Road
- Collector Line

**Wheatridge Renewable Energy Facility II Wind Layout**

- Turbine
- Met Tower
- Center Line Road
- Collector Line

**Wheatridge Renewable Energy Facility II Solar Layout**

- Solar Access Roads
- Proposed Collector Line
- Fenceline

TETRA TECH
NEXTera ENERGY RESOURCES

Reference Map


1:105,000 WGS 1984 UTM Zone 11N

0 0.5 1 2 3 4 Miles

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# Wheatridge Renewable Energy Facility I & Wheatridge Renewable Energy Facility II

## Figure 2.1
## Site Boundaries & Facilities

**MORROW AND UMATILLA COUNTIES, OR**

- Wheatridge Renewable Energy Facility I Site Boundary
- Wheatridge Renewable Energy Facility II Site Boundary
- Site Boundary Overlap
- Substation & Battery Storage
- O&M Facility
- State Highway
- Local Road

**Wheatridge Renewable Energy Facility I Wind Layout**

- Turbine
- Met Tower
- Center Line Road
- Collector Line

**Wheatridge Renewable Energy Facility II Wind Layout**

- Turbine
- Met Tower
- Center Line Road
- Collector Line

Wheatridge Renewable Energy Facility II Solar Layout

- Solar Access Roads
- Proposed Collector Line
- Fenceline

TETRA TECH

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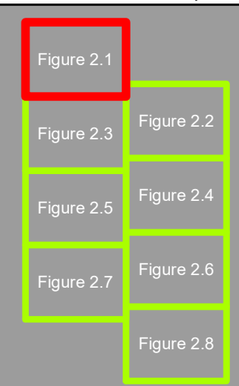
Reference Map




Grieb-Wood Rd
Canyon Rd
Little Juniper Ln
Juniper Canyon Rd
Barak Martin Rd N
Bombing Range Rd
Grieb Ln
Juniper Rd
LITTLE JUNIPER CANYON
STRAWBERRY CANYON

1:20,000 WGS 1984 UTM Zone 11N

0 0.25 0.5 1 1.5 2 Miles

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# Wheatridge Renewable Energy Facility I & Wheatridge Renewable Energy Facility II

## Figure 2.2
## Site Boundaries & Facilities

**MORROW AND UMATILLA COUNTIES, OR**

- Wheatridge Renewable Energy Facility I Site Boundary
- Wheatridge Renewable Energy Facility II Site Boundary
- Site Boundary Overlap
- Substation & Battery Storage
- O&M Facility
- State Highway
- Local Road

**Wheatridge Renewable Energy Facility I Wind Layout**

- Turbine
- Met Tower
- Center Line Road
- Collector Line

**Wheatridge Renewable Energy Facility II Wind Layout**

- Turbine
- Met Tower
- Center Line Road
- Collector Line

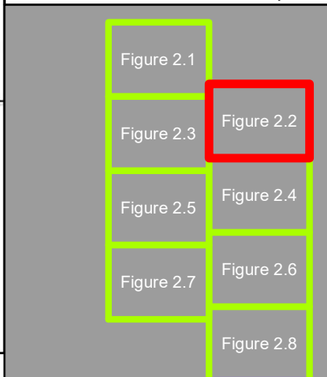
Wheatridge Renewable Energy Facility II Solar Layout

- Solar Access Roads
- Proposed Collector Line
- Fenceline

TETRA TECH

NEXTera ENERGY RESOURCES

Reference Map




Grieb Ln
Doherty Rd
Lower Sand Hollow Rd
Melville Rd
Sand Hollow
207
Sand Hollow Rd
Barclay Rd
Barclay Ln
Lexington-Echo Hwy
Kilkenny Rd
Kemp Rd

1:20,000 WGS 1984 UTM Zone 11N

0 0.25 0.5 1 1.5 2 Miles

NOT FOR CONSTRUCTION

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# Wheatridge Renewable Energy Facility I & Wheatridge Renewable Energy Facility II

## Figure 2.3
## Site Boundaries & Facilities

**MORROW AND UMATILLA COUNTIES, OR**

- Wheatridge Renewable Energy Facility I Site Boundary
- Wheatridge Renewable Energy Facility II Site Boundary
- Site Boundary Overlap
- Substation & Battery Storage
- O&M Facility
- State Highway
- Local Road

**Wheatridge Renewable Energy Facility I Wind Layout**

- Turbine
- Met Tower
- Center Line Road
- Collector Line

**Wheatridge Renewable Energy Facility II Wind Layout**

- Turbine
- Met Tower
- Center Line Road
- Collector Line

Wheatridge Renewable Energy Facility II Solar Layout

- Solar Access Roads
- Proposed Collector Line
- Fenceline

TETRA TECH

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Reference Map


Juniper Canyon Rd
Barak Martin Rd N
Bombing Range Rd
Strawberry Ln
Strawberry East Rd
Lindsay Rd
Barak Martin Rd
207
Lexington-Echo Hwy
1185 ft
1168 ft
1313 ft

1:20,000 WGS 1984 UTM Zone 11N

0 0.25 0.5 1 1.5 2 Miles

NOT FOR CONSTRUCTION

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# Wheatridge Renewable Energy Facility I & Wheatridge Renewable Energy Facility II

## Figure 2.4
## Site Boundaries & Facilities

**MORROW AND UMATILLA COUNTIES, OR**

Wheatridge Renewable Energy Facility I Site Boundary
Wheatridge Renewable Energy Facility II Site Boundary
Site Boundary Overlap
Substation & Battery Storage
O&M Facility
State Highway
Local Road

**Wheatridge Renewable Energy Facility I Wind Layout**
Turbine
Met Tower
Center Line Road
Collector Line

**Wheatridge Renewable Energy Facility II Wind Layout**
Turbine
Met Tower
Center Line Road
Collector Line

Wheatridge Renewable Energy Facility II Solar Layout
Solar Access Roads
Proposed Collector Line
Fenceline

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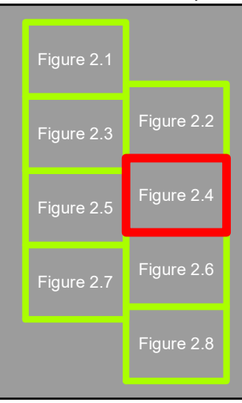
Reference Map




Beach Ln
Kilkenny Rd
Sand Hollow Rd
Barclay Rd
Myers Ln
Baseline Ln
Culsforth Rd
Spur Loop

1:20,000 WGS 1984 UTM Zone 11N

0 0.25 0.5 1 1.5 2 Miles

NOT FOR CONSTRUCTION

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# Wheatridge Renewable Energy Facility I & Wheatridge Renewable Energy Facility II

## Figure 2.5
## Site Boundaries & Facilities

**MORROW AND UMATILLA COUNTIES, OR**

- Wheatridge Renewable Energy Facility I Site Boundary
- Wheatridge Renewable Energy Facility II Site Boundary
- Site Boundary Overlap
- Substation & Battery Storage
- O&M Facility
- State Highway
- Local Road

**Wheatridge Renewable Energy Facility I Wind Layout**

- Turbine
- Met Tower
- Center Line Road
- Collector Line

**Wheatridge Renewable Energy Facility II Wind Layout**

- Turbine
- Met Tower
- Center Line Road
- Collector Line

Wheatridge Renewable Energy Facility II Solar Layout

- Solar Access Roads
- Proposed Collector Line
- Fenceline

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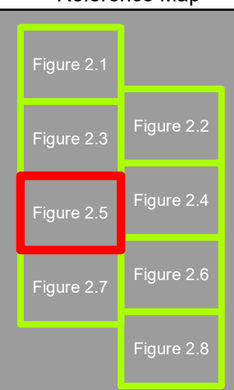
Reference Map




Juniper Canyon Rd
Lindsay Rd
Lexington-Echo Hwy
207
Baseline Ln
Lexington Grange Rd
Nichols Rd
JUNIPER CANYON
STRAWBERRY CANYON
1349 ft
1386 ft
1488 ft

1:20,000 WGS 1984 UTM Zone 11N

0 0.25 0.5 1 1.5 2 Miles

NOT FOR CONSTRUCTION

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# Wheatridge Renewable Energy Facility I & Wheatridge Renewable Energy Facility II

## Figure 2.6
## Site Boundaries & Facilities

**MORROW AND UMATILLA COUNTIES, OR**

- Wheatridge Renewable Energy Facility I Site Boundary
- Wheatridge Renewable Energy Facility II Site Boundary
- Site Boundary Overlap
- Substation & Battery Storage
- O&M Facility
- State Highway
- Local Road

**Wheatridge Renewable Energy Facility I Wind Layout**

- Turbine
- Met Tower
- Center Line Road
- Collector Line

**Wheatridge Renewable Energy Facility II Wind Layout**

- Turbine
- Met Tower
- Center Line Road
- Collector Line

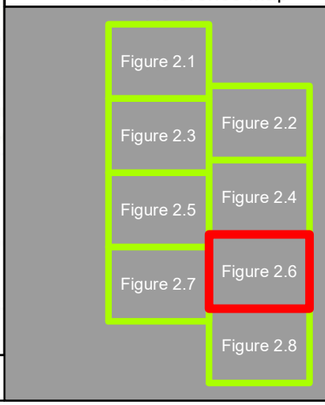
Wheatridge Renewable Energy Facility II Solar Layout

- Solar Access Roads
- Proposed Collector Line
- Fenceline

TETRA TECH

NEXTera ENERGY RESOURCES

Reference Map




Cutsforth Rd

Dolven Rd

Spur Loop

Sand Hollow Rd

SAND HOLLOW

1:20,000 WGS 1984 UTM Zone 11N

0 0.25 0.5 1 1.5 2 Miles

NOT FOR CONSTRUCTION

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# Wheatridge Renewable Energy Facility I & Wheatridge Renewable Energy Facility II

## Figure 2.7
## Site Boundaries & Facilities

**MORROW AND UMATILLA COUNTIES, OR**

- Wheatridge Renewable Energy Facility I Site Boundary
- Wheatridge Renewable Energy Facility II Site Boundary
- Site Boundary Overlap
- Substation & Battery Storage
- O&M Facility
- State Highway
- Local Road

**Wheatridge Renewable Energy Facility I Wind Layout**

- Turbine
- Met Tower
- Center Line Road
- Collector Line

**Wheatridge Renewable Energy Facility II Wind Layout**

- Turbine
- Met Tower
- Center Line Road
- Collector Line

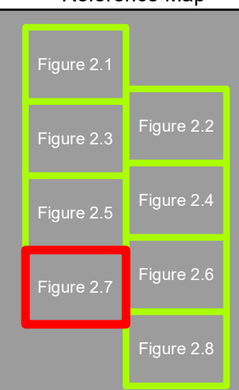
Wheatridge Renewable Energy Facility II Solar Layout

- Solar Access Roads
- Proposed Collector Line
- Fenceline

TETRA TECH

NEXTera ENERGY RESOURCES

Reference Map




Petteys Ln
Lexington Grange Rd
Lexington-Echo Hwy
207
State Hwy 207
Old Airport Rd
Turner Ln
Lovegren Rd
Piper Canyon Rd
Cutsforth Rd
Nichols Rd
Piper Canyon
SWAGGA

1654 ft
1989 ft
1846 ft
1813 ft
2108 ft
2011 ft

1:20,000 WGS 1984 UTM Zone 11N

0 0.25 0.5 1 1.5 2 Miles

NOT FOR CONSTRUCTION

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# Wheatridge Renewable Energy Facility I & Wheatridge Renewable Energy Facility II

## Figure 2.8
## Site Boundaries & Facilities

**MORROW AND UMATILLA COUNTIES, OR**

- Wheatridge Renewable Energy Facility I Site Boundary
- Wheatridge Renewable Energy Facility II Site Boundary
- Site Boundary Overlap
- Substation & Battery Storage
- O&M Facility
- State Highway
- Local Road

**Wheatridge Renewable Energy Facility I Wind Layout**

- Turbine
- Met Tower
- Center Line Road
- Collector Line

**Wheatridge Renewable Energy Facility II Wind Layout**

- Turbine
- Met Tower
- Center Line Road
- Collector Line

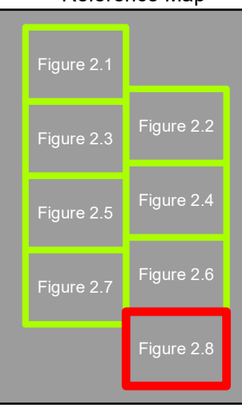
Wheatridge Renewable Energy Facility II Solar Layout

- Solar Access Roads
- Proposed Collector Line
- Fenceline

TETRA TECH

NEXTera ENERGY RESOURCES

Reference Map




Bell Canyon

Bell Canyon Loop

Sand Hollow Rd

Blackhorse Canyon Ln

Dee Cox Rd

1:20,000 WGS 1984 UTM Zone 11N

0 0.25 0.5 1 1.5 2 Miles

NOT FOR CONSTRUCTION

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# Attachment 1. Wheatridge Renewable Energy Facility Press Release

# Portland General Electric and NextEra Energy Resources to develop nation's first major energy facility co-locating wind, solar and battery storage

Project will advance Oregon's clean energy future while delivering affordable electricity for PGE customers

Feb. 12, 2019

Portland, Ore. — Portland General Electric Company (NYSE: POR) and NextEra Energy Resources, LLC, a subsidiary of NextEra Energy, Inc. (NYSE: NEE), today announced plans to construct a new energy facility in Eastern Oregon combining 300 megawatts of wind generation with 50 megawatts of solar generation and 30 megawatts of battery storage.

The new project, called the Wheatridge Renewable Energy Facility, will be the first of this scale in North America to co-locate and integrate these three technologies, creating an improved zero-emissions resource and accelerating Oregon's transition to clean energy.

"We're moving aggressively to integrate smart grid technologies and renewable energy to give customers affordable, clean, low-carbon energy," said Maria Pope, PGE president and CEO. "Wheatridge will be a model for integrating renewable generation and storage to cost-effectively reduce emissions while maintaining a reliable grid." The new facility, combined with PGE's existing resources, will bring the company's wind generation portfolio to a nameplate total of more than 1,000 megawatts (one gigawatt), available from five owned or contracted wind farms in the Northwest – enough power to

serve the equivalent of 340,000 homes. The solar farm will be one of the largest in Oregon, while the battery storage facility will be the largest in Oregon and one of the largest in the United States.

With the addition of these new renewable resources, PGE expects to meet about 50 percent of its customers’ power needs with emissions-free generation.

“We’re pleased to work with Portland General Electric on the Wheatridge Renewable Energy Facility, an exciting opportunity to combine wind, solar and energy storage,” said Armando Pimentel, president and CEO of NextEra Energy Resources, the world's largest generator of renewable energy from the wind and the sun. “This venture will allow PGE’s customers to benefit from more renewable energy over more hours of the day and create substantial economic value for the communities that host this project, many of whom stand to benefit for years to come.”

U.S. Senator Ron Wyden has supported the project from its inception.

"Portland General Electric's decision to join with NextEra Energy Resources in constructing the Wheatridge Renewable Energy Facility provides both a well-earned economic boost to Eastern Oregon and an important step on our country's needed path to green energy," said Wyden. "I am proud to have worked with Morrow County and all the local officials who teamed up in the 'Oregon Way' spirit of finding solutions to make sure this homegrown renewable energy project could achieve this milestone.”

## Project details

Power from the facility will be generated by 120 wind turbines manufactured by GE Renewable Energy, Inc. The wind farm will be located just north of Lexington, Oregon, in Morrow County. The specific equipment to be used at the associated solar farm and battery storage facility is still to be determined.

Wheatridge will provide up to 300 jobs during construction of the wind site and up to 175 jobs during construction of the solar and storage sites. Approximately 10 full-time employees will operate the combined facilities once they’re commissioned for service.

## Ownership and construction

Swaggart Wind Power, LLC began development and permitting of the Wheatridge wind farm in 2009. Swaggart is an affiliate of MAP® Energy. The project was then acquired by a NextEra Energy Resources subsidiary in 2017. NextEra and PGE expanded the project scope to include solar generation and battery storage.

PGE will own 100 megawatts of the wind project. A subsidiary of NextEra Energy Resources will own the balance of the project and sell its output to PGE under 30-year power purchase agreements. NextEra Energy Resources’ subsidiary will build and operate the combined facility. The split ownership and PPA structure will allow the two energy companies to share project risks and benefits.

The wind component of the facility will be operational by December 2020 and qualify for the federal production tax credit at the 100 percent level. Construction of the solar and battery components is planned for 2021 and will qualify for the federal investment tax credit. The tax credits help reduce the cost of the project over time, thus reducing costs to PGE’s customers.

PGE expects to invest approximately $160 million for its owned portion of the project.

### Competitive selection process

The Wheatridge project was the prevailing bid submitted in response to a request for proposals for renewable resources PGE issued in May 2018. The agreements signed by PGE and NextEra Energy Resources’ subsidiary will be subject to prudency review on customers’ behalf by the Oregon Public Utility Commission. The agreements are also subject to approval by NextEra Energy management, which is anticipated in March.

## Quotes regarding the Wheatridge Renewable Energy Facility:

"Portland General Electric's decision to join with NextEra Energy Resources in constructing the Wheatridge renewable energy facility provides both a well-earned economic boost to Eastern Oregon and an important step on our country's needed path to green energy. I am proud to have worked with Morrow County and all the local officials who teamed up in the 'Oregon Way' spirit of finding solutions to make sure this homegrown renewable energy project could achieve this milestone.” — U.S. Senator Ron Wyden

"This is great news for Morrow County's residents and businesses! This project will benefit our communities through jobs, property taxes and community support. We have a long, positive history of working with PGE, and they have been a good community partner. We look forward to working with them to make this project a success." — Don Russell, Morrow County Commissioner

"One of Beaverton's top priorities is being a positive force in addressing climate change while maintaining a healthy economy. We're glad to have PGE as a partner in advancing these goals and applaud the addition of this new resource that will ensure our residents and businesses are served with increasingly clean and affordable electricity." — Denny Doyle, Mayor of Beaverton, Oregon

"We are excited to hear this news. These types of renewable Oregon-based projects are critical to the growth and economy of the region, including Morrow County and Port of Morrow. PGE is one of the businesses located at the Port of Morrow Industrial Park, and we have appreciated PGE's partnership and continued investment in Morrow County." — Ryan Neal, Port of Morrow general manager

"We're moving aggressively to integrate smart grid technologies and renewable energy to give customers affordable, clean, low-carbon energy. Wheatridge will be a model for integrating renewable generation and storage to cost-effectively reduce emissions while maintaining a reliable grid." — Maria Pope, PGE president and CEO

"We're pleased to work with Portland General Electric on the Wheatridge Renewable Energy Facility, an exciting opportunity to combine wind, solar and energy storage. This venture will allow PGE's customers to benefit from more renewable energy over more hours of the day and create substantial economic value for the communities that host this project, many of whom stand to benefit for years to come." — Armando Pimentel, president and CEO of NextEra Energy Resources

For more information contact Steve Corson, PGE, **503-464-8444**, **Steven.Corson@pgn.com (mailto:Steven.Corson@pgn.com)**

**About Portland General Electric Company**

Portland General Electric (NYSE: POR) is a fully integrated energy company based in Portland, Oregon, serving approximately 887,000 customers in 51 cities. For more than 130 years, PGE has been delivering safe, affordable and reliable energy to Oregonians. Together with its customers, PGE has the

No. 1 voluntary renewable energy program in the U.S. With approximately 3,000 employees across the state, PGE is committed to helping its customers and the communities it serves build a clean energy future. For more information, visit **PortlandGeneral.com/CleanVision (/our-company/energy-strategy/oregons-clean-energy-future)**.

**Safe Harbor Statement**

Statements in this news release that relate to future plans, objectives, expectations, performance, events and the like may constitute "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995, Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. Such forward-looking statements include statements concerning the future performance of the Tucannon River Wind Farm and other expected benefits of the project, as well as other statements identified by words including, but not limited to, "will," "anticipates," "believes," "intends," "estimates," "promises," "expects," "should," "conditioned upon" and similar expressions. Investors are cautioned that any such forward-looking statements are subject to risks and uncertainties, including regulatory, operational and legal matters, as well as other factors that could affect the deployment and successful operation of turbines at the Tucannon River Wind Farm project. As a result, actual results may differ materially from those projected in the forward-looking statements. All forward-looking statements included in this news release are based on information available to the Company on the date hereof and such statements speak only as of the date hereof. The Company assumes no obligation to update any such forward-looking statements. Prospective investors should also review the risks and uncertainties listed in the Company's most recent Annual Report on Form 10-K and the Company's reports on Forms 8-K and 10-Q filed with the United States Securities and Exchange Commission, including Management's Discussion and Analysis of Financial Condition and Results of Operation and the risks described therein from time to time.

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# Attachment 2. Red-lined Site Certificates

**ENERGY FACILITY SITING COUNCIL**

**OF THE**

**STATE OF OREGON**

# ~~Fourth Amended~~ Site Certificate for the Wheatridge ~~Wind~~ Renewable Energy Facility I

**ISSUANCE DATES**

| | |
|---|---|
| **Site Certificate** | **TBD~~April 28, 2017~~** |
| **~~First Amended Site Certificate~~** | **~~July 27, 2017~~** |
| **~~Second Amended Site Certificate~~** | **~~November 16, 2018~~** |
| **~~Third Amended Site Certificate~~** | **~~December 14, 2018~~** |
| **~~Fourth Amended Site Certificate~~** | **~~November 22, 2019~~** |

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**Attachments**

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| Attachment A | Facility Site Boundary Map |

**Acronyms and Abbreviations**

| | |
|---|---|
| ASC | Application for Site Certificate |
| Council | Oregon Energy Facility Siting Council |
| Department | Oregon Department of Energy |
| DOGAMI | Oregon Department of Geology and Mineral Industries |
| ESCP | Erosion and Sediment Control Plan |
| NPDES | National Pollutant Discharge Elimination System |
| O&M | Operations and Maintenance |
| OAR | Oregon Administrative Rule |
| ODFW | Oregon Department of Fish and Wildlife |
| ORS | Oregon Revised Statute |
| NRHP | National Register of Historic Places |
| WGS | Washington Ground Squirrel |

## 1.0 Introduction and Site Certification

This site certificate is a binding agreement between the State of Oregon (State), acting through the Energy Facility Siting Council (Council), and Wheatridge Wind Energy, LLC (certificate holder), which is a wholly-owned subsidiary of NextEra Energy Resources, LLC (NextEra or parent company). As authorized under Oregon Revised Statue (ORS) Chapter 469, the Council issues this site certificate authorizing certificate holder to construct, operate and retire the Wheatridge ~~Wind~~ Renewable Energy Facility I (facility) at the below described site within Morrow ~~and Umatilla~~ ~~c~~County~~ies~~, subject to the conditions set forth herein.

Both the State and certificate holder must abide by local ordinances, state law and the rules of the Council in effect on the date this site certificate is executed. However, upon a clear showing of a significant threat to public health, safety, or the environment that requires application of later-adopted laws or rules, the Council may require compliance with such later-adopted laws or rules (ORS 469.401(2)).

The findings of fact, reasoning and conclusions of law underlying the terms and conditions of this site certificate are set forth in the following documents, incorporated herein by this reference: (a) the *Final Order on the Application for Site Certificate for the Wheatridge Wind Energy Facility* issued on April 28, 2017 (hereafter, *Final Order on the Application*); (b) *Final Order on Request for Transfer* issued on July 27, 2017; *Final Order on Request for Amendment 3* issued on November 16, 2018; *Final Order on Request for Amendment 2* issued on December 14, 2018; and *Final Order on Request for Amendment 4* issued on November 22, 2019. In interpreting this site certificate, any ambiguity will be clarified by reference to the following, in order of priority: *(1) Final Order on Request for Amendment 5 (~~1~~2) Final Order on Request for Amendment 4 (~~2~~3) Final Order on Request for Amendment 2; (~~3~~4) Final Order on Request for Amendment 3; (~~4~~5) Final Order on Request for Amendment 1; (~~5~~6) Final Order on the Application, and (6) the record* of the proceedings that led to the above referenced orders. This site certificate binds the State and all counties, cities and political subdivisions in Oregon as to the approval of the site and the construction, operation, and retirement of the facility as to matters that are addressed in and governed by this site certificate (ORS 469.401(3)). This site certificate does not address, and is not binding with respect to, matters that are not included in and governed by this site certificate, and such matters include, but are not limited to: employee health and safety; building code compliance; wage and hour or other labor regulations; local government fees and charges; other design or operational issues that do not relate to siting the facility (ORS 469.401(4)); and permits issued under statutes and rules for which the decision on compliance has been delegated by the federal government to a state agency other than the Council (ORS 469.503(3)).

The definitions in ORS 469.300 and OAR 345-001-0010 apply to the terms used in this site certificate, except where otherwise stated, or where the context clearly indicates otherwise.

Each affected state agency, county, city, and political subdivision in Oregon with authority to issue a permit, license, or other approval addressed in or governed by this site certificate, shall upon submission of the proper application and payment of the proper fees, but without hearings or other proceedings, issue such permit, license or other approval subject only to conditions set forth in this site certificate. In addition, each state agency or local government agency that issues a permit, license or other approval for this facility shall continue to exercise enforcement

authority over such permit, license or other approval (ORS 469.401(3)). For those permits, licenses, or other approvals addressed in and governed by this site certificate, the certificate holder shall comply with applicable state and federal laws adopted in the future to the extent that such compliance is required under the respective state agency statutes and rules (ORS 469.401(2)).

The certificate holder must construct, operate and retire the facility in accordance with all applicable rules as provided for in Oregon Administrative Rule (OAR) Chapter 345, Division 26. After issuance of this site certificate, the Council shall have continuing authority over the site and may inspect, or direct the Oregon Department of Energy (Department) to inspect, or request another state agency or local government to inspect, the site at any time in order to ensure that the facility is being operated consistently with the terms and conditions of this site certificate (ORS 469.430).

The obligation of the certificate holder to report information to the Department or the Council under the conditions listed in this site certificate is subject to the provisions of ORS 192.502 *et seq.* and ORS 469.560. To the extent permitted by law, the Department and the Council will not publicly disclose information that may be exempt from public disclosure if the certificate holder has clearly labeled such information and stated the basis for the exemption at the time of submitting the information to the Department or the Council. If the Council or the Department receives a request for the disclosure of the information, the Council or the Department, as appropriate, will make a reasonable attempt to notify the certificate holder and will refer the matter to the Attorney General for a determination of whether the exemption is applicable, pursuant to ORS 192.450.

The Council recognizes that many specific tasks related to the design, construction, operation and retirement of the facility will be undertaken by the certificate holder's agents or contractors. Nevertheless, the certificate holder is responsible for ensuring compliance with all provisions of the site certificate.

The duration of this site certificate shall be the life of the facility, subject to termination pursuant to OAR 345-027-0010 or the rules in effect on the date that termination is sought, or revocation under ORS 469.440 and OAR 345-029-0100 or the statutes and rules in effect on the date that revocation is ordered. The Council shall not change the conditions of this site certificate except as provided for in OAR Chapter 345, Division 27.

## 2.0 Facility Location

The energy facility and its related ~~and~~ or supporting facilities are located within Morrow ~~and Umatilla~~ county~~ies~~. The site boundary, as defined in OAR 345-001-0010, encompasses approximately 2,882 ~~14,624~~ acres of private land and includes the perimeter of the energy facility site, its related and supporting facilities, all temporary laydown and staging areas and all transmission corridors and micrositing corridors proposed by the certificate holder, as approved by the Council.[1]

The energy facility ~~is divided into two groups, Wheatridge West and Wheatridge East. Wheatridge West~~ is located entirely within Morrow County, bisected by Oregon Highway 207, approximately 5 miles northeast of Lexington and approximately 7 miles northwest of Heppner~~. Wheatridge East is located approximately 16 miles northeast of Heppner and includes land in both Morrow and Umatilla counties. Wheatridge West and Wheatridge East are connected via a 230 kV transmission line or "intraconnection" transmission line~~ (see facility site boundary map provided in Attachment A).

### 2.1 Site Boundary

The site boundary encompasses a total of 2,882 ~~14,624~~ acres of privately owned land~~: 2,956 acres in Wheatridge East, 10,042 acres in Wheatridge West, and 1,626 acres in the intraconnection transmission line corridor.~~ . Table 1 identifies the Public Land Survey System sections in which the site boundary is located.

**Table 1. Location of Site Boundary by Township, Range and Section**

| Township | Range | Section(s) |
|---|---|---|
| **Wheatridge East** | | |
| ~~1N~~ | ~~28E~~ | ~~4, 5, 8, 9, 16, 17, 21~~ |
| ~~2N~~ | ~~28E~~ | ~~2, 3, 9, 10, 11, 14, 15, 16, 21, 22, 27, 28, 29, 32, 33~~ |
| **Wheatridge West** | | |
| 2N | 25E | 25, 26, 27, 34, 35, 36 |
| 1N | 25E | 1, 2, 11, 12, 13, 14, 15, 22, 23, 24 |
| 1N | 26E | ~~4,~~ 6, 7, 8, 9, ~~15~~, 16, 17, 18, 19, ~~20,~~ 21, 22~~, 28, 29, 30, 32, 33~~ |
| ~~1S~~ | ~~25E~~ | ~~1, 12~~ |
| ~~1S~~ | ~~26E~~ | ~~2, 3, 4, 5, 6, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 25, 26, 27, 28, 29, 34, 35, 36~~ |
| ~~2S~~ | ~~26E~~ | ~~1, 12~~ |
| ~~**Intraconnection Corridor**~~ | | |
| ~~1S~~ | ~~27E~~ | ~~7, 12, 13, 14, 15, 16, 17, 18, 21, 22, 23, 24~~ |
| ~~1S~~ | ~~28E~~ | ~~3, 4, 7, 8, 9, 16, 17, 18~~ |
| ~~1N~~ | ~~28E~~ | ~~28, 33~~ |

[1] Energy facility site, as defined in OAR 345-001-0010(54), means all land upon which an energy facility is located or proposed to be located.

For this facility, the certificate holder requested that the site boundary represent the "micrositing corridor" for the placement of facility components to allow some flexibility in specific component locations and design in response to site-specific conditions and engineering requirements to be determined prior to construction. The Council permits final siting flexibility within a micrositing corridor when the certificate holder demonstrates that requirements of all applicable standards have been satisfied by adequately evaluating the entire corridor and location of facility components anywhere within the corridor.

## 2.2 Micrositing Corridors

The certificate holder requested flexibility to locate components of the energy facility and its related and supporting facilities within a micrositing corridor to allow adjustment of the specific location of components, while establishing outer boundaries of potential construction for purposes of evaluating potential impacts.

~~The site boundary contains two separate micrositing corridors, one for wind facility components and one for solar facility components.~~ Micrositing corridors for wind turbines are a minimum of approximately 660 feet in width around turbines, and wider in some locations. The site boundary width around site access roads and electrical collection lines (collector lines) is narrower, between 200 feet and 500 feet in width. The micrositing corridor is wider for the area surrounding the substations, meteorological towers (met towers), ~~O&M building,~~ and construction yards.

~~Micrositing corridors for solar facility components, as presented in Figure 1 *Solar Micrositing Corridors* of this amended site certificate, include the area for Solar Array 1 and Solar Array 2, which includes includes private access roads, service roads, a 34.5 kV collection system, gates and perimeter security fence.~~

## 2.3 ~~Intraconnection Transmission Line Corridor for the Wind Facility~~

~~The certificate holder obtained approval of four routing options associated with the wind facility for the 230 kV intraconnection transmission line that interconnects Wheatridge West and Wheatridge East for the transmission of generated power. The intraconnection transmission line corridor is approximately 1,000-feet in width and ranges in length from 24.5 to 31.5 miles, based upon the four approved transmission line route options.~~

~~The four approved transmission line route options range in length from 24.5 to 31.5 miles and would follow the same alignment for approximately 18 miles from the Wheatridge East substation to the crossing at Sand Hollow Road. For the remainder of the route, Options 1 and 3 traverse the same alignment, with Option 1 extending 7 miles longer than Option 3; Option 2 and 4 traverse the same alignment, with Option 2 extending 3.5 miles longer than Option 4. Option 1 and 2 differ for an approximately 4 mile segment located between Sand Hollow Road and the Wheatridge West substation (primary), with Option 2 traversing from Sand Hollow Road through the alternative (2b) Wheatridge West substation to the primary (1) Wheatridge West substation. The four approved routing options and associated transmission line corridors are presented in Attachment A of the site certificate (and are clearly delineated in figures provided in ASC Exhibit C).~~

## 3.0 Facility Description

The facility includes wind ~~and solar~~ energy generation components, ~~each~~ with related or supporting facilities. The energy generation capacity of the facility~~, with wind and solar components,~~ at full build out by the specified construction completion deadlines is ~~650~~ 100 MW. Wind energy facility components are further described in Section 3.1 and 3.1.1 of this site certificate~~; solar energy facility components are further described in Section 3.2 and 3.2.1 of this site certificate~~.

### 3.1 Wind Energy Facility Components

The construction commencement deadline for the wind energy facility and its related or supporting facilities must begin by May 24, 2020 (under General Standard Condition 1 (GEN-GS-01) and construction of these components must be completed on or before May 24, 2023 (under General Standard Condition 2 (GEN-GS-02).

Wind energy generation components include up to ~~292~~ 40 wind turbines with a total generating capacity up to 100 MW. Wind turbines each consist of a nacelle, a three-bladed rotor, turbine tower and foundation. The nacelle houses the equipment such as the gearbox, generator, brakes, and control systems for the turbine. The total height of the turbine tower and blades (tip-height) ranges between 431 and 4~~76~~99.7 feet, depending on the turbine model selected.

The base of each wind turbine tower foundation requires a cleared area (typically a gravel pad) up to 80 feet in diameter. The turbines are grouped in linear "strings" within the micrositing corridor and interconnect with a 34.5 kV electrical collection system (described below). Most wind turbine types include a generator step-up (GSU) transformer installed at the base of the tower that would be used to increase the voltage of the turbine to that of the electrical collection system. Table 2 shows the range of turbine specifications approved for use at the facility site.

**Table 2: Approved Wind Turbine Dimensions**

| Specification | Maximum (ft) |
|---|---|
| Blade Length | 204.1 |
| Hub Height | 291.3 |
| Rotor Diameter | 416.7 |
| Total Height (tower height plus blade length) | 499.7 |
| Aboveground Blade-Tip Clearance | 70.5 |
| Wind turbine types with the maximum dimension specifications shall be equipped with Low Noise Trailing Edge blades. | |

### 3.1.1 Related or Supporting Facilities to Wind Energy Facility Components

Related or supporting facilities to the wind energy facility components as described below must commence construction by May 24, 2020:

- Electrical collection system (includes up to ~~88~~ 20 miles of mostly underground 34.5 kV collector lines)
- ~~Up to three~~ One collector substation~~s~~
- ~~Up to 32 miles of up to two overhead, parallel 230 kV transmission lines~~
- Up to ~~1~~2 permanent meteorological (MET) towers
- Communication and Supervisory Control and Data Acquisition (SCADA) System
- ~~~~
- Up to ~~73~~20 miles of new or improved access roads
- Additional temporary construction areas (including staging areas and one or more temporary concrete batch plant areas)
- Battery Storage System~~s~~ (~~20 and 30 MW, each~~ located on up to 5 acres) and Interconnection Facilities

Construction of these related or supporting facilities must be complete by May 24, 2023.

*Electrical Collection System*

The electrical collection system includes up to ~~88~~ 20 miles of mostly underground 34.5 kV collector lines. Electrical connections are located underground or in enclosed junction boxes between the turbine and the pad-mounted GSU transformer. From the GSU transformer to the collector lines the connections are installed along and between the turbine strings to collect power generated by each wind turbine and to route the power to ~~one of three~~ the collector substation, which step up the power from 34.5 kV to 230 kV.

The collector lines are underground, to the extent practicable, in trenches approximately three-feet wide and not less than two- to three-feet deep, generally alongside access roads, to minimize ground disturbance. Where land use and soil conditions make a buried depth of three-feet infeasible, collector lines may be buried at a depth of less than three feet, while still adhering to National Electrical Safety Code (NESC) standards.

~~Collector lines may be run overhead in situations where a buried cable would be infeasible or would create unnecessary impacts, such as at stream or canyon crossings. Overhead collector lines are supported by a wooden or steel pole structure. Each support pole has been buried approximately 6 feet in the ground and extends to a height of approximately 60 feet above ground, spaced 100 to 200 feet apart. Overhead collector lines are only anticipated in Wheatridge West. The facility includes up to 10.8 miles of overhead collector lines; however, the specific locations of overhead collector lines will not be known until site geotechnical work has been completed during pre-construction activities.~~

~~No more than 88 miles of collector lines would be needed for wind facility components.~~

*Collector Substations*

The facility includes ~~up to two~~ one substation~~s within Wheatridge West and one substation within Wheatridge East. The proposed substation locations are presented in ASC Exhibit C. However,~~ Wheatridge has requested, and Council grants, the ability to microsite the final location ~~and number (up to three) of substations~~ within the micrositing corridor.

Prior to construction, the substation site will be cleared and graded, with a bed of crushed rock applied for a durable surface. ~~Each~~ The collector substation is located on a two- to ten-acre site, enclosed by a locked eight-foot tall wire mesh fence. ~~Each~~ The substation consists of transformers, transmission line termination structures, a bus bar, circuit breakers and fuses, control systems, meters, and other equipment.

~~*230 kV Intraconnection Transmission Line*~~

~~The facility includes one or two parallel overhead 230 kV intraconnection transmission lines supported by H-frame or monopole structures constructed of either wood or steel that extends 24.5 to 31.5 miles in length, depending on the route option selected. The 230 kV overhead transmission line structures are approximately 60 to 150 feet tall and spaced approximately 400 to 800 feet apart depending on the terrain. Each transmission line route requires acquisition of an approximately 150-foot wide right-of-way from private landowners.~~

~~The four approved transmission line routing options and associated corridors for the intraconnection transmission line are described below (see Attachment A figure and figures contained in ASC Exhibit C):~~

- ~~Option 1: Two Project Substations to Longhorn~~
  - ~~This option runs from Substation 3 in Wheatridge East to Substation 1 in Wheatridge West and then to the proposed UEC/CB Strawberry substation, just to the west of Wheatridge West, for interconnection to a UEC or UEC/CB operated Gen-tie Line to the proposed BPA Longhorn substation. The intraconnection line route is 31.5 miles (50.5 kilometers) in length.~~
- ~~Option 2: Three Project Substations to Longhorn (Final facility design with battery storage system would not include this routing option)~~
  - ~~This option runs from Substation 3 in Wheatridge East to Substation 2b in Wheatridge West, then on to Substation 2a in Wheatridge West, and then to the proposed UEC/CB Strawberry substation, just west of Wheatridge West, for interconnection to a UEC or UEC/CB operated Gen-tie Line to the proposed BPA Longhorn substation. The intraconnection line route is 31.3 miles (50.3 kilometers) in length.~~
- ~~Option 3: Two Project Substations to Stanfield~~
  - ~~This option runs from Substation 1 in Wheatridge West to Substation 3 in Wheatridge East for interconnection to a UEC operated Gen-tie Line to the proposed BPA Stanfield substation. The intraconnection line route is 24.5 miles (39.4 kilometers) in length.~~
- ~~Option 4: Three Project Substations to Stanfield (Final facility design with battery storage system would not include this routing option)~~

- ~~This option runs from Substation 2a in Wheatridge West to Substation 2b in Wheatridge West, and then to Substation 3 in Wheatridge East for interconnection to a UEC operated Gen-tie Line to the proposed BPA Stanfield substation. The intraconnection line route is 27.8 miles (44.7 kilometers) in length.~~

*Meteorological Towers*

The facility includes up to ~~12~~ permanent met towers. ~~Up to five met towers are sited in Wheatridge East and up to seven met towers are sited in Wheatridge West for the collection of wind speed and direction data.~~ Each met tower has a free-standing, non-guyed design and is approximately 328 feet (100 meters) in height. Installation of permanent met towers results in approximately 98-feet (30-meters) in diameter of temporary land disturbance per tower and approximately 32-feet (10-meter) in diameter of permanent land disturbance per tower. Permanent met towers are fitted with safety lighting and paint as required by the Federal Aviation Administration (FAA).

*Communication and SCADA System*

The facility includes a communication system, consisting of fiber optic and copper communication lines that connect the turbines, met towers, and substations to the O&M buildings. A SCADA system is installed in the O&M buildings to enable remote operation to collect operating data for each wind turbine, and to archive wind and performance data. SCADA system wires are collocated with the collector lines both in the underground trenches and overhead, if necessary.

~~*O&M Buildings*~~

~~The facility includes up to two O&M buildings, each located on up to 1.1 acres, one within Wheatridge East and one within Wheatridge West. Each O&M building consists of a single-story, prefabricated structure approximately 6,000 to 9,000 square feet in size, and includes an office, break room, kitchen, lavatory with shower, utility room, covered vehicle parking, storage for maintenance supplies and equipment, and SCADA system. A permanent, fenced, graveled parking and storage area for employees, visitors, and equipment is located adjacent to each O&M building. Each building is served by an on-site well and septic system and power supplied by a local service provider using overhead and/or underground lines.~~

*Access Roads*

Primary access to the facility site is from Interstate 84 (I-84) via Bombing Range Road or Oregon Route 207 (OR-207). The certificate holder completed improvements to existing public roads to accommodate construction activities, including flattening crests or filling dips, widening sharp corners, or adding road base material; the certificate holder is required to consult with the appropriate county road master on specific improvements prior to construction. The certificate holder committed to completing upgrade to existing roads according to applicable state and county road standards and after consultation with Morrow ~~and Umatilla~~ County staff. The certificate holder is required to implement a road use agreement with each county to specify requirements, including that all existing public roads used to access the site would be left in as good or better condition than that which existed prior to the start of construction.

Access to the turbines, construction yards, substations, and O&M buildings is from a network of private access roads constructed or improved by the certificate holder. The certificate holder will grade and gravel all newly constructed and improved site access roads to meet load requirements for heavy construction equipment, as necessary. Following turbine construction, the certificate holder will narrow the site access roads for use during operations and maintenance. The additional disturbed width required during construction will be restored following the completion of construction by removing gravel surfacing, restoring appropriate contours with erosion and stormwater control best management practices (BMPs), decompacting as needed, and revegetating the area appropriately.

In the maximum impact scenario, wind energy facility components will require up to ~~73~~ 20 miles of access roads.

~~Temporary access roads were needed for the construction of the intraconnection transmission line(s). The intraconnection transmission line(s) can be constructed and maintained using only large trucks rather than heavy construction cranes, and construction will occur during the dry time of year when the ground surface is hard enough to support those vehicles. Therefore, the interconnection transmission lines do not include permanent access roads. The total mileage of the temporary access roads needed for constructing the intraconnection transmission line(s) depends on the intraconnection line route option chosen. The shortest route would require approximately 22.8 miles of access roads, while the longest would require approximately 25.5 miles.~~

*Additional Construction Yards*

The facility includes up to ~~four~~ two temporary construction yards located within the site boundary to facilitate the delivery and assembly of material and equipment. The construction yards are used for temporary storage of diesel and gasoline fuels, which are located in an above-ground 1,000-gallon diesel and 500-gallon gasoline tank, within designated secondary containments areas.

Each construction yard occupies between 15 and 20 acres, and was graded and gravel surfaced. The certificate holder is required to restore all construction yards to pre-construction conditions unless an agreement with the landowner leads to some or all of the construction yard being retained after construction.

In addition, the certificate holder may utilize one or more temporary concrete batch plant areas, located within the construction yard area. The temporary concrete batch plants are permitted and operated by the selected contractor.

*Battery Storage Systems and Interconnection Facilities (DC Coupled)*

The battery storage systems associated with wind energy facility components include the following:

- Series of modular containers or a building per system ~~(approximately 80 feet long, 100 feet wide and 15-20 feet tall for the 20 MW system);~~ approximately 190 feet long, 100 feet wide and 15-20 feet tall for the 30 MW system)
    - Each system would contain lithium-ion batteries within battery modules placed in anchored racks within containers or building.

- Approximately eighteen 2.7 mega-voltampere (MVA) inverters with associated step up transformers with a combined footprint approximately 8 feet by 4 feet.
- Each system would be equipped with a gas pressured deluge fire suppression system, independent smoke detection system, and external fire water tank
- Each system would include a cooling system comprised of a bank of four power conditioning system fan units with motor

- Control house, approximately 16 feet by 11 feet, with an external heating, ventilation and air conditioning unit (HVAC)
- Protective device; skid-mounted power transformer; and bi-directional inverter

Battery and inverter equipment would be electrically connected via a combination of aboveground cable trays, underground conduit, and covered cable trenches. Site surfacing would remain primarily gravel. The battery storage systems would interconnect with the facility substation~~s~~ via feeder lines.

## 3.2 ~~Solar Energy Facility Components~~

~~The construction commencement deadline for the solar energy facility and its related or supporting facilities must begin by DATE TBD [three years following effective site certificate date] (under General Standard Condition 1 (GEN-GS-01) and construction of these components must be completed on or before DATE TBD [three years from date of construction commencement] (under General Standard Condition 2 (GEN-GS-02).~~

~~Solar energy facility components include up to two solar arrays located within Wheatridge West, entirely within Morrow County, on Exclusive Farm Use zoned land. The solar arrays consist of photovoltaic panels mounted onto tracking modules and arranged in strings within the solar micrositing corridors. Strings of modules are connected by electrical collector lines and inverters that convert the direct current power generated by panels to alternating current power. Transformers placed near the inverters step up power to 34.5 kV for transmission to the Wheatridge West substation. The maximum layout including total number of modules, configuration, dimensions, total energy generating capacity and mounting system of solar array components shall be substantially as described in Request for Amendment 4.~~

~~*Photovoltaic Modules and Racking*~~

~~Each solar module is approximately 6 feet by 3 feet, placed on a nonspecular, galvanized steel rack. Each set of approximately 70 racked modules is mounted approximately 5 feet off the ground on a single-axis tracker that would rotate 60 degrees to the east and west. Each tracker is supported by steel posts; post depth varies depending on soil conditions, but the posts are typically placed 8 feet below the surface. The maximum of height of the modules at full tilt would be approximately 16 feet.~~

~~*Combiner Boxes, Inverters and Transformers*~~

~~The current produced by solar modules is in the form of direct current (DC). Within each module block, several DC electrical conduits (cables on the back of the modules) aggregate electricity produced from each of the modules into a combiner box. Approximately 18 combiner boxes are located throughout each module block for a total of approximately 740 combiner boxes. The photovoltaic modules are arranged into blocks, with each block connecting via collector lines to~~

approximately 41 modular inverter enclosures. Inverters convert DC current into alternating current (AC) power to then be transmitted to the grid. The inverter AC output voltage (480 volts) is stepped up to a higher voltage (34.5 kilovolts [kV]) by approximately 41 pad-mounted transformers designed to integrate with the inverter.

### 3.2.1 Related or Supporting Facility to Solar Energy Facility Components

Related or supporting facilities associated with the solar facility must begin construction by the dates described in General Standard Condition 1 (GEN-GS-01) and construction must be completed, substantially as described below, by the deadline stabled in General Standard Condition 2 (GEN-GS-02).

*Electrical Collection System*

Electricity generated from the solar energy facility components are aggregated via underground 34.5 kV cables to an above- or belowground 34.5 kV collector line that interconnect to Wheatridge West collector substation. Underground AC electrical cables are buried to a minimum of 3 feet. Overhead collector lines are supported by a wooden or steel monopole structure, with foundations extending 6 feet in depth and structure height of approximately 60 feet above ground. The collection system also includes two 34.5 kV collector line routes outside of the perimeter fenceline; one route extends approximately 2.32 miles from Solar Array 1 to Wheatridge West collector substation. The second collector line interconnects Solar Array 1 to Solar Array 2 and extends approximately 0.66 miles along Bombing Range Road.

*Service Roads, Gates, and Fencing*

Service roads, approximately 16 feet wide, located within and around the perimeter of the proposed solar arrays, and within the solar micrositing corridors, to facilitate access for construction and maintenance purposes. Vegetation is cleared and maintained along perimeter roads to provide a vegetation clearance area extending 100 feet wide for fire safety. Internal roads are all-weather, compacted gravel and approximately 20 feet wide, with an internal turning radius of 28 feet. Vegetation maintenance along solar array interior roads includes mowing to a height no more than 3 inches.

The perimeter service road is bordered by a 7 or 8-foot-high chain-link security fence. There is also a locked security entrance gates to allow vehicle and pedestrian access.

*Wheatridge West Collector Substation Expansion*

Wheatridge West collector substation (by Strawberry Lane) includes 10 acres, 5 of which accommodate electrical equipment such as an additional transformer, switches, protective relay and metering equipment needed to handle the power generated by the solar energy facility components.

*Battery Storage System Sites – Distributed Locations (AC Coupled)*

Solar energy facility components include approximately 41 distributed sites of sites of of lithium-ion batteries housed within concrete containers or similar containment throughout and within the solar

~~array fencelines. Each container measures up to 12 feet wide, 36 feet long and 10 feet tall. Lithium-ion battery storage systems are modular systems. Each module contains multiple smaller battery cells, each measuring up to 3.2 by 7 centimeters. Modules are contained in anchored racks within the concrete containers; typically, each rack houses 12 battery modules along with a switchgear assembly. Cooling equipment is located either on top of the concrete containers or along the side.~~

## 4.0 Site Certificate Conditions

### 4.1 Condition Format

The conditions in Sections 4.2 through 4.7 of this Site Certificate are organized and coded to indicate the phase of implementation, the standard the condition is required to satisfy, and an identification number (1, 2, 3, etc.)[2]. The table below presents a "key" for phase of implementation:

| Key | Type of Conditions/Phase of Implementation |
|---|---|
| GEN | General Conditions: Design, Construction and Operation |
| PRE | Pre-Construction Conditions |
| CON | Construction Conditions |
| PRO | Pre-Operational Conditions |
| OPR | Operational Conditions |
| RET | Retirement Conditions |

The standards are presented using an acronym; for example, the General Standard of Review is represented in the condition numbering as "GS"; the Soil Protection standard is represented in the condition numbering as "SP" and so forth.

For example, the coding of Condition GEN-GS-01 represents that the condition is a general condition (GEN) to be implemented during design, construction and operation of the facility, is required to satisfy the Council's General Standard of Review, and is condition number 1.

[2] The identification number is not representative of an order that conditions must be implemented; it is intended only to represent a numerical value for identifying the condition.

## 4.2 General Conditions (GEN): Design, Construction and Operations

| Condition Number | General (GEN) Conditions |
|---|---|
| ***STANDARD: GENERAL STANDARD OF REVIEW (GS) [OAR 345-022-0000]*** | |
| GEN-GS-01 | The certificate holder shall:<br>a. Begin construction of wind facility components and its related or supporting facilities, by May 24, 2020. On or before May 24, 2020, the certificate holder shall provide written notification to the Department that it has met the construction commencement deadline. Construction is defined in OAR 345-001-0010.<br>~~b. Begin construction of solar facility components and its related or supporting facilities, as approved the Fourth Amended Site Certificate, by November 22, 2022). On or before November 22, 2022, the certificate holder shall provide written notification to the Department that it has met the construction commencement deadline. Construction is defined in OAR 345-001-0010.~~<br>[Final Order on ASC, General Standard Condition 1; AMD2; AMD4]<br>[Mandatory Condition OAR 345-025-0006(4)] |
| GEN-GS-02 | The certificate holder shall:<br>a. Complete construction of the wind facility components and its related or supporting facilities by May 24, 2023. The certificate holder shall promptly notify the Department of the date of completion of construction.<br>~~b. Complete construction of solar facility components and its related or supporting facilities, as approved the Fourth Amended Site Certificate, by November 22, 2025. On or before November 22, 2025, the certificate holder shall promptly notify the Department of the date of completion of construction.~~<br>[Final Order on ASC, General Standard Condition 2; AMD2; AMD4]<br>[Mandatory Condition OAR 345-025-0006(4)] |
| GEN-GS-03 | The certificate holder shall design, construct, operate, and retire the facility:<br>a. Substantially as described in the site certificate;<br>b. In compliance with the requirements of ORS Chapter 469, applicable Council rules, and applicable state and local laws, rules and ordinances in effect at the time the site certificate is issued; and<br>c. In compliance with all applicable permit requirements of other state agencies.<br>[Final Order on ASC, Mandatory Condition 2] [OAR 345-025-0006(3)] |
| GEN-GS-04 | Except as necessary for the initial survey or as otherwise allowed for wind energy facilities, transmission lines or pipelines under this section, the certificate holder shall not begin construction, as defined in OAR 345-001-0010, or create a clearing on any part of the site until the certificate holder has construction rights on all parts of the site. For the purpose of this rule, "construction rights" means the legal right to engage in construction activities. For wind energy facilities, transmission lines or pipelines, if the certificate holder does not have construction rights on all parts of the site, the certificate holder may nevertheless begin construction, as defined in OAR 345-001-0010, or create a clearing on a part of the site if the certificate holder has construction rights on that part of the site and: |

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| | a. The certificate holder would construct and operate part of the facility on that part of the site even if a change in the planned route of a transmission line or pipeline occurs during the certificate holder's negotiations to acquire construction rights on another part of the site; or<br>b. The certificate holder would construct and operate part of a wind energy facility on that part of the site even if other parts of the facility were modified by amendment of the site certificate or were not built.<br>[Final Order on ASC, Mandatory Condition 3] [OAR 345-025-0006 (5)] |
| GEN-GS-05 | If the certificate holder becomes aware of a significant environmental change or impact attributable to the facility, the certificate holder shall, as soon as possible, submit a written report to the department describing the impact on the facility and any affected site certificate conditions.<br>[Final Order on ASC, Mandatory Condition 6] [OAR 345-025-0000(6)] |
| GEN-GS-06 | The Council shall include as conditions in the site certificate all representations in the site certificate application and supporting record the Council deems to be binding commitments made by the applicant.<br>[Final Order on ASC, Mandatory Condition 5] [OAR 345-025-0006(10)] |

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| GEN-GS-07 | Upon completion of construction, the certificate holder shall restore vegetation to the extent practicable and shall landscape all areas disturbed by construction in a manner compatible with the surroundings and proposed use. Upon completion of construction, the certificate holder shall remove all temporary structures not required for facility operation and dispose of all timber, brush, refuse and flammable or combustible material resulting from clearing of land and construction of the facility.<br>[Final Order on ASC, Mandatory Condition 6] [OAR 345--025-0006(11)] |
| GEN-GS-08 | The certificate holder shall design, engineer and construct the facility to avoid dangers to human safety presented by seismic hazards affecting the site that are expected to result from all maximum probable seismic events. As used in this rule "seismic hazard" includes ground shaking, ground failure, landslide, liquefaction triggering and consequences (including flow failure, settlement buoyancy, and lateral spreading), cyclic softening of clays and silts, fault rupture, directivity effects and soil-structure interaction. For coastal sites, this also includes tsunami hazards and seismically-induced coastal subsidence.<br>[Final Order on ASC, Mandatory Condition 7] [OAR 345-025-0006(12)] |
| GEN-GS-09 | The certificate holder shall notify the Department, the State Building Codes Division and the Department of Geology and Mineral Industries promptly if site investigations or trenching reveal that conditions in the foundation rocks differ significantly from those described in the application for a site certificate. After the Department receives the notice, the Council may require the certificate holder to consult with the Department of Geology and Mineral Industries and the Building Codes Division and to propose mitigation actions.<br>[Final Order on ASC, Mandatory Condition 8] [OAR 345-025-0006 (13)] |
| GEN-GS-10 | The certificate holder shall notify the department, the State Building Codes Division and the Department of Geology and Mineral Industries promptly if shear zones, artesian aquifers, deformations or clastic dikes are found at or in the vicinity of the site. After the Department receives notice, the Council may require the certificate holder to consult with the Department of Geology and Mineral Industries and the Building Codes Division to propose and implement corrective or mitigation actions.<br>[Final Order on ASC, Mandatory Condition 9] [OAR 345-025-0006 (14)] |
| GEN-GS-11 | Before any transfer of ownership of the facility or ownership of the site certificate holder, the certificate holder shall inform the department of the proposed new owners. The requirements of OAR 345-027-0100 apply to any transfer of ownership that requires a transfer of the site certificate.<br>[Final Order on ASC, Mandatory Condition 10] [OAR 345--025-0006 (15)] |
| GEN-GS-12 | ~~The Council shall specify an approved corridor in the site certificate and shall allow the certificate holder to construct the pipeline or transmission line anywhere within the corridor, subject to the conditions of the site certificate. If the applicant has analyzed more than one corridor in its application for a site certificate, the Council may, subject to the Council's standards, approve more than one corridor.~~<br>~~The transmission line corridors approved by EFSC pursuant to this condition is described in Section 2.3 of the site certificate, and presented in the facility site map (see Attachment A of the site certificate.~~<br>~~[Final Order on ASC, Site Specific Condition 1] [OAR 345-025-0010(5)]]~~ |
| ***STANDARD: ORGANIZATIONAL EXPERTISE (OE) [OAR 345-022-0010]*** | |
| GEN-OE-01 | Any matter of non-compliance under the site certificate is the responsibility of the certificate holder. Any notice of violation issued under the site certificate will be issued to the certificate holder. Any civil penalties under the site certificate will be levied on the certificate holder. |

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| | [Final Order on ASC, Organizational Expertise Condition 5] |
| GEN-OE-02 | In addition to the requirements of OAR 345-026-0170, within 72 hours after discovery of incidents or circumstances that violate the terms or conditions of the site certificate, the certificate holder must report the conditions or circumstances to the department.<br>[Final Order on ASC, Organizational Expertise Condition 6] |
| GEN-OE-03 | During facility construction and operation, the certificate holder shall report to the Department, within 7 days, any change in the corporate structure of the parent company, NextEra Energy Resources, LLC. The certificate holder shall report promptly to the Department any change in its access to the resources, expertise, and personnel of NextEra Energy Resources, LLC.<br>[Amendment #1 , Organizational Expertise Condition 9] |
| GEN-OE-04 | The certificate holder shall:<br>a. Prior to and during construction, as applicable, provide evidence to the Department that a contractual agreement has been obtained for transport and disposal of battery and battery waste by a licensed hauler and requires the third-party to comply with all applicable laws and regulations, including applicable provisions of 49 CFR 173.185.<br>b. Prior to transporting and disposing of battery and battery waste during facility operations, provide evidence to the Department that a contractual agreement has been obtained for transport and disposal of battery and battery waste by a licensed hauler and requires the third-party to comply with all applicable laws and regulations, including applicable provisions of 49 CFR 173.185.<br>[Final Order on AMD2, Organizational Expertise Condition 10] |
| ***STANDARD: STRUCTURAL (SS) [OAR 345-022-0020]*** | |
| GEN-SS-01 | The certificate holder shall design, engineer, and construct the facility in accordance with the current versions of the latest International Building Code, Oregon Structural Specialty Code, and building codes as adopted by the State of Oregon at the time of construction.<br>[Final Order on ASC, Structural Standard Condition 2] |

| *STANDARD: LAND USE (LU) [OAR 345-022-0030]* | |
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| GEN-LU-01 | The certificate holder shall design the facility to comply with the following setback distances in Morrow County:<br>a. Wind turbines shall be setback from the property line of any abutting property of any non-participant property owners a minimum of 110 percent of maximum blade tip height of the wind turbine tower.<br>b. Wind turbines shall be setback 100 feet from all property boundaries, including participant property boundaries within the site boundary, if practicable.<br>c. Wind turbine foundations shall not be located on any property boundary, including participant property boundaries within the site boundary.<br>d. Wind turbines shall be setback 110% of the overall tower-to-blade tip height from the boundary right-of-way of county roads, state and interstate highways.<br>~~e. Perimeter fenceline of solar facility components shall be setback: 20 feet from property fronting on a local minor collector road rights of way; 30 feet from property fronting on a major collector road right of way; and 80 feet from an arterial road right of way, unless other provisions for combining access are provided and approved by the county.~~<br>~~f. East and west sides of perimeter fenceline of solar facility components shall be setback 20 feet from adjacent land uses except that on corner lots or parcels the side yard on the street side shall be a minimum of 30 feet.~~<br>~~g. North side of perimeter fenceline of solar facility components shall be setback a minimum of 25 feet.~~<br>[Final Order on ASC; AMD3 Land Use Condition 1; AMD4] |
| GEN-LU-02 | During design and construction of the facility, the certificate holder shall:<br>a. Obtain an access permit for changes in access on Morrow County roads; and<br>b. Improve or develop private access roads impacting intersections with Morrow County roads in compliance with Morrow County access standards.<br>[Final Order on ASC, Land Use Condition 4] |
| GEN-LU-03 | During design and construction, the certificate holder shall implement the following actions on all meteorological towers approved through the site certificate:<br>a. Paint the towers in alternating bands of white and red or aviation orange; or<br>b. Install aviation lighting as recommended by the Federal Aviation Administration.<br>[Final Order on ASC, Land Use Condition 9] |
| GEN-LU-04 | The certificate holder shall design and construct the facility using the minimum land area necessary for safe construction and operation. The certificate holder shall:<br>a. Locate access roads and temporary construction laydown and staging areas to minimize disturbance of farming practices;<br>b. Place turbines and transmission intraconnection lines along the margins of cultivated areas to reduce the potential for conflict with farm operations, where feasible.<br>~~c. Site solar array collector lines, if aboveground, within or adjacent to an existing road, railroad or transmission line right-of-way; parallel to an existing transmission corridor; or co-located with existing transmission line or each other, unless not technically feasible due to lack of availability, geographic constraints, engineering limitations, or other reasons as agreed upon by the Department consistent with this condition.~~<br>d. Bury underground communication and electrical lines within the area disturbed by temporary road widening, where possible. |

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| | [Final Order on ASC, Land Use Condition 11; AMD4] |
| GEN-LU-05 | During design and construction of the facility, the certificate holder shall ensure that fencing and landscaping selected and used for the ~~O&M building and similar~~ facility components sited within Morrow County blend with the nature of the surrounding area.<br>[Final Order on ASC, Land Use Condition 14] |
| GEN-LU-06 | ~~During micrositing of the facility, the certificate holder shall ensure that wind turbines are sited based on a minimum setback of:~~<br>~~a. 110% of the overall tower-to-blade tip height from the boundary right-of-way of county roads and state and interstate highways in Umatilla and Morrow counties.~~<br>~~b. 2 miles from turbine towers to a city urban growth boundary.~~<br>~~c. 1 mile from turbine towers to land within Umatilla County lands zoned Unincorporated Community.~~<br>~~d. 2 miles from turbine towers to rural residences within Umatilla County.~~<br>~~e. 164 feet (50 meters) from tower and facility components to known archeological, historical and cultural sites or CTUIR cultural site.~~<br>~~[Final Order on ASC;AMD3 Land Use Condition 16;]~~ |
| GEN-LU-07 | ~~During design and construction, the certificate holder must ensure that the O&M building in Umatilla County is consistent with the character of similar agricultural buildings used by commercial farmers or ranchers in Umatilla County.~~<br>~~[Final Order on ASC, Land Use Condition 20]~~ |

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| GEN-LU-08 | ~~During facility design and construction of new access roads and road improvements, the certificate holder shall implement best management practices after consultation with the Umatilla County Soil Water Conservation district. The new and improved road designs must be reviewed and certified by a civil engineer.~~<br>~~[Final Order on ASC, Land Use Condition 22]~~ |
| GEN-LU-09 | ~~Before beginning electrical production, the certificate hold shall provide the location of each turbine tower, electrical collecting lines, the O&M building, the substation, project access roads, and portion of the intraconnection transmission line located in Umatilla County to the department and Umatilla County in a format suitable for GPS mapping.~~<br>~~[Final Order on ASC, Land Use Condition 24]~~ |
| GEN-LU-10 | ~~During construction and operation of the facility, the certificate holder shall deliver a copy of the annual report required under OAR 345-026-0080 to the Umatilla County Planning Commission on an annual basis.~~<br>~~[Final Order on ASC, Land Use Condition 28]~~ |
| ***STANDARD: RETIREMENT AND FINANCIAL ASSURANCE (RT) [OAR 345-022-0050]*** | |
| GEN-RF-01 | The certificate holder shall prevent the development of any conditions on the site that would preclude restoration of the site to a useful, non-hazardous condition to the extent that prevention of such site conditions is within the control of the certificate holder.<br>[Final Order on ASC, Retirement and Financial Assurance Condition 1]<br>[Mandatory Condition OAR 345-025-0006(7)] |
| ***STANDARD: FISH AND WILDLIFE HABITAT (FW) [OAR 345-022-0060]*** | |
| GEN-FW-01 | During construction and operation, the certificate holder shall impose a 20 mile per hour speed limit on new and improved private access roads, which have been approved as a related and supporting facility to the energy facility.<br>[Final Order on ASC, Fish and Wildlife Habitat Condition 2] |
| GEN-FW-02 | The certificate holder shall construct all overhead collector and transmission intraconnection lines in accordance with the latest Avian Power Line Interaction Committee design standards, and shall only install permanent meteorological towers that are unguyed.<br>[Final Order on ASC, Fish and Wildlife Habitat Condition 6] |
| ***STANDARD: SCENIC RESOURCES (SR) [OAR 345-022-0080]*** | |
| GEN-SR-01 | To reduce visual impacts associated with lighting facility structures, other than lighting on structures subject to the requirements of the Federal Aviation Administration or the Oregon Department of Aviation, the certificate holder shall implement the following measures:<br>a. Outdoor night lighting at the collector substation~~s~~, ~~Operations and Maintenance Buildings,~~ and battery storage systems, must be<br>i. The minimum number and intensity required for safety and security;<br>ii. Directed downward and inward within the facility to minimize backscatter and offsite light trespass; and<br>iii. Have motion sensors and switches to keep lights turned off when not needed.<br>[Final Order on ASC, Scenic Resources Condition 1, AMD2] |

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| GEN-SR-02 | The certificate holder shall:<br>a. Design and construct the ~~O&M buildings~~ battery storage systems to be generally consistent with the character of agricultural buildings used by farmers or ranchers in the area, and the buildings shall be finished in a neutral color to blend with the surrounding landscape;<br>b. Paint or otherwise finish turbine structures in a grey, white, or off-white, low reflectivity coating to minimize reflection and contrast with the sky, unless required otherwise by the local code applicable to the structure location.<br>~~c. Design and construct support towers for the intraconnection transmission lines using either wood or steel structures and utilize finish with a low reflectivity coating;~~<br>d. Finish substation structures and battery storage systems utilizing neutral colors to blend with the surrounding landscape;<br>e. Minimize use of lighting and design lighting to prevent offsite glare;<br>f. Not display advertising or commercial signage on any part of the proposed facility;<br>g. Limit vegetation clearing and ground disturbance to the minimum area necessary to safely and efficiently install the facility equipment;<br>h. Water access roads and other areas of ground disturbance during construction, as needed, to avoid the generation of airborne dust; and<br>i. Restore and revegetate temporary impact areas as soon as practicable following completion of construction.<br>[Final Order on ASC, Scenic Resources Condition 2, AMD2] |
| ***STANDARD: PUBLIC SERVICES (PS) [OAR 345-022-0110]*** | |
| GEN-PS-01 | During construction and operation, the certificate holder shall coordinate with its solid waste handler to provide the information solicited through the Oregon Department of Environmental Quality's Recycling Collector Survey to the Morrow County waste shed representative on an annual basis.<br>[Final Order on ASC, Public Services Condition 5] |
| GEN-PS-02 | The certificate holder shall construct turbine towers with no exterior ladders or access to the turbine blades and shall install locked tower access doors. The O&M buildings shall be fenced. The certificate holder shall keep tower access doors and O&M buildings locked at all times, except when authorized personnel are present.<br>[Final Order on ASC, Public Services Condition 11] |

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| GEN-PS-03 | Prior to construction and operation of the facility, , the certificate holder must provide employee fire prevention and response training that includes instruction on facility fire hazards, fire safety, emergency notification procedures, use of fire safety equipment, and fire safety rules and regulations. The certificate holder shall notify the department and the first-response agencies listed in the Emergency Management Plan developed to comply with Public Services Condition 13 at least 30 days prior to the annual training to provide an opportunity to participate in the training. Equivalent training shall be provided to new employees or subcontractors working on site that are hired during the fire season. The certificate holder must retain records of the training and provide them to the department upon request.<br>[Final Order on ASC, Public Services Condition 18] |
| GEN-PS-04 | The certificate holder shall design, construct and maintain the battery storage systems within a 100 foot vegetation free zone.<br>[Final Order on AMD2, Public Services Condition 23] |
| ***STANDARD: PUBLIC HEALTH AND SAFETY FOR WIND FACILITIES (WF) [OAR 345-024-0010]*** | |
| GEN-WF-01 | During construction and operation, the certificate holder shall follow manufacturers' recommended handling instructions and procedures to prevent damage to turbine or turbine tower components.<br>[Final Order on ASC, Public Health and Safety Standards for Wind Facilities Condition 3] |
| GEN-WF-02 | The certificate holder shall notify the department, the Morrow County Planning Department ~~and the Umatilla County Planning Department~~ within 72 hours of any accidents including mechanical failures on the site associated with construction or operation of the facility that may result in public health or safety concerns.<br>[Final Order on ASC, Public Health and Safety Standards for Wind Facilities Condition 5] |

### 4.3 Pre-Construction (PRE) Conditions

| Condition Number | Pre-Construction (PRE) Conditions |
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| ***STANDARD: ORGANIZATIONAL EXPERTISE (OE) [OAR 345-022-0010]*** | |
| PRE-OE-01 | Before beginning construction, the certificate holder shall notify the department of the identity and qualifications of the major design, engineering and construction contractor(s) for the facility. The certificate holder shall select contractors that have substantial experience in the design, engineering and construction of similar facilities. The certificate holder shall report to the department any changes of major contractors.<br>[Final Order on ASC, Organizational Expertise Condition 1] |
| PRE-OE-02 | Before beginning construction, the certificate holder shall notify the department of the identity and qualifications of the construction manager to demonstrate that the construction manager is qualified in environmental compliance and has the capability to ensure compliance with all site certificate conditions.<br>[Final Order on ASC, Organizational Expertise Condition 2] |
| PRE-OE-03 | Prior to construction, the certificate holder shall contractually require all construction contractors and subcontractors involved in the construction of the facility to comply with all applicable laws and regulations and with the terms and conditions of the site certificate. Such contractual provisions shall not operate to relieve the certificate holder of responsibility under the site certificate.<br>[Final Order on ASC, Organizational Expertise Condition 3] |
| PRE-OE-04 | Before beginning construction, the certificate holder shall notify the department before conducting any work on the site that does not qualify as surveying, exploration, or other activities to define or characterize the site. The notice must include a description of the work and evidence that its value is less than $250,000 or evidence that the certificate holder has satisfied all conditions that are required prior to beginning construction.<br>[Final Order on ASC, Organizational Expertise Condition 4] |
| PRE-OE-05 | Prior to construction, the certificate holder must provide the department ~~and Umatilla~~ and Morrow County~~ies~~ with the name(s) and location(s) of the aggregate source and evidence of the source's county permit(s).<br>[Final Order on ASC, Organizational Expertise Condition 7] |
| PRE-OE-06 | The certificate holder must:<br>a. Prior to construction of wind facility components, provide evidence to the department and Morrow ~~and Umatilla counties~~ county that the third party that will construct, own and operate the interconnection transmission line has obtained all necessary approvals and permits for that interconnection transmission line and that the certificate holder has a contract with the third party for use of the transmission line.<br>~~b. Prior to construction of solar facility components approved in the Fourth Amended Site Certificate, provide to the Department a list of all third-party permits that would normally be governed by the site certificate and that are necessary for construction and operation (e.g. Water Pollution Control Facilities Permit, Air Contaminant Discharge Permit, Limited Water Use License). Once obtained, the certificate holder shall provide copies of third-party permits to the Department.~~ |

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| | ~~During construction and operation, promptly report to the Department if any third-party permits referenced in sub(b) of this condition have been cited for a Notice of Violation.~~[Final Order on ASC, Organizational Expertise Condition 8; AMD4] |

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| ***STANDARD: STRUCTURAL (SS) [OAR 345-022-0020]*** | |
| PRE-SS-01 | Before beginning construction, the certificate holder must:<br>a) Submit a protocol to the Department and Oregon Department of Geology & Mineral Industries (DOGAMI), for review, with the applicable codes, standards, and guidelines to be used, and proposed geotechnical work to be conducted for the site-specific geotechnical investigation report.<br>b) Following receipt and review of Department and DOGAMI comments on the protocol per (a), the certificate holder shall conduct a site-specific geological and geotechnical investigation, and shall report its findings to DOGAMI and the department. The report shall be used by the certificate holder in final facility layout and design. The department shall review, in consultation with DOGAMI, and confirm that the investigation report includes an adequate assessment of the following information:<br>• Subsurface soil and geologic conditions of the site boundary<br>• Define and delineate geological and geotechnical hazards, and means to mitigate these hazards<br>• Geotechnical design criteria and data for the turbine foundations, foundations of substations, O&M buildings, battery storage systems, roads, and other related and supporting facilities<br>• Design data for installation of underground and overhead collector lines, and overhead transmission lines<br>• Investigation of specific areas with potential for slope instability and landslide hazards. Landslide hazard evaluation shall be conducted by LIDAR and field work, as recommended by DOGAMI<br>• Investigations of the swell and collapse potential of loess soils within the site boundary.<br>[Final Order on ASC, Structural Standard Condition 1; AMD2] |
| PRE-SS-02 | Prior to construction, the certificate holder shall include as part of the geotechnical investigation required per Structural Standard Condition 1, an investigation of all potentially active faults within the site boundary, ~~including the fault labeled as 2438 on Figures H-1 and H-2 of ASC Exhibit H~~. The investigation shall include a description of the potentially active faults, their potential risk to the facility, and any additional mitigation that will be undertaken by the certificate holder to ensure safe design, construction, and operation of the facility.<br>[Final Order on ASC, Structural Standard Condition 3] |
| PRE-SS-03 | Prior to construction, the certificate holder shall include as part of the geotechnical investigation required per Structural Standard Condition 1 an investigation of specific areas with potential for slope instability and shall site turbine strings appropriate to avoid potential hazards. The landslide hazards shall be investigated and mapped before final facility layout and design. The landslide hazard evaluation shall be conducted by a combination of LIDAR and field work.<br>[Final Order on ASC, Structural Standard Condition 4] |
| PRE-SS-04 | Prior to construction, the certificate holder shall include as part of the geotechnical investigation required per Structural Standard Condition 1, an investigation of the swell and collapse potential of loess soil in the site boundary. Based on the results of the investigation, the certificate holder shall include mitigation measures including, as necessary, over-excavating and replacing loess soil with structural fill, wetting and compacting, deep foundations, or avoidance of specific areas.<br>[Final Order on ASC, Structural Standard Condition 5] |
| ***STANDARD: SOIL PROTECTION (SP) [OAR 345-022-0022]*** | |
| PRE-SP-01 | Prior to beginning construction, the certificate holder shall provide a copy of a DEQ-approved construction Spill Prevention Control and Countermeasures (SPCC) plan, to be implemented during |

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| | facility construction. The SPCC plan shall include the measures described in Exhibit I of ASC and in the final order approving the site certificate.<br>[Final Order on ASC, Soil Protection Condition 3] |

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| PRE-SP-02 | Prior to construction, the certificate holder shall ensure that the final Revegetation Plan includes a program to protect and restore agricultural soils temporarily disturbed during facility construction. As described in the final order, agriculture soils shall be properly excavated, stored, and replaced by soil horizon. Topsoil shall be preserved and replaced. The Revegetation Plan shall be finalized pursuant to Fish and Wildlife Habitat Condition 11.<br>[Final Order on ASC, Soil Protection Condition 4] |
| PRE-SP-03 | ~~Prior to beginning construction of the O&M buildings, the certificate holder shall secure any necessary septic system permits from DEQ. Copies of the necessary permits must be provided to the department prior to beginning construction of the O&M buildings.~~<br>~~[Final Order on ASC, Soil Protection Condition 7]~~ |
| ***STANDARD: LAND USE (LU) [OAR 345-022-0030]*** | |
| PRE-LU-01 | Before beginning construction, the certificate holder shall complete the following:<br>a. Pay the requisite fee and obtain a Zoning Permit from Morrow County for all facility components sited in Morrow County; and<br>b. Obtain all other necessary local permits, including building permits.<br>c. Provide the county with a building permit application, a third party technical report which includes:<br>1. Evaluates fire hazards and;<br>2. Presents mitigation and recommendations for a fire suppression system designed for the battery storage systems.<br>d. The certificate holder shall provide copies of the third-party technical report and issued permits to the Department.<br>[Final Order on ASC, Land Use Condition 3; AMD2] |
| PRE-LU-02 | Before beginning construction, the certificate holder shall pay the requisite fee and obtain a Conditional Use Permit as required under Morrow County Zoning Ordinance Article 6 Section 6.015.<br>[Final Order on ASC, Land Use Condition 5] |
| PRE-LU-03 | Before beginning construction, the certificate holder shall prepare a Weed Control Plan that is consistent with Morrow and Umatilla County weed control requirements to be approved by the department. The department shall consult with Morrow ~~and Umatilla~~ county~~ies~~ and ODFW. The final plan must be submitted to the department no less than 30 days prior to the beginning of construction. The certificate holder shall implement the requirements of the approved plan during all phases of construction and operation of the facility.<br>[Final Order on ASC, Land Use Condition 6] |
| PRE-LU-04 | Before beginning construction, the certificate holder shall record in the real property records of Morrow County a Covenant Not to Sue with regard to generally accepted farming practices on adjacent farmland.<br>[Final Order on ASC, Land Use Condition 7] |
| PRE-LU-05 | Prior to beginning construction, the certificate holder shall consult with surrounding landowners and lessees and shall consider proposed measures to reduce or avoid any adverse impacts to farm practices on surrounding lands and to avoid any increase in farming costs during construction and operation of the facility. Prior to beginning construction, the certificate holder shall provide evidence of this consultation to the department, Morrow County~~, and Umatilla County~~.<br>[Final Order on ASC, Land Use Condition 12] |

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| PRE-LU-06 | Before beginning construction, the certificate holder shall work with the Morrow County Road Department to identify specific construction traffic related concerns, and develop a traffic management plan that specifies necessary traffic control measures to mitigate the effects of the temporary increase in traffic. The certificate holder must provide a copy of the traffic management plan to the department and Morrow County, and must implement the traffic management plan during construction.<br>[Final Order on ASC, Land Use Condition 13] |
| PRE-LU-07 | ~~Before beginning construction, the certificate holder must:~~<br>~~a. Pay the requisite fee(s) and obtain a Zoning Permit(s) from Umatilla County for facility components sited within Umatilla County, including, but not limited to, turbines, substation, O&M building, and the intraconnection line.~~<br>~~b. Provide the Department and county with a building permit application that includes a third party technical report which:~~<br>~~1. Evaluates fire hazards, and~~<br>~~2. Presents mitigation and recommendations for a fire suppression system designed for the battery storage systems.~~<br>~~c. The certificate holder shall provide copies of the third-party technical report and issued permits to the Department.~~<br>~~[Final Order on ASC, Land Use Condition 15; AMD2]~~ |
| PRE-LU-08 | Prior to facility construction, the certificate holder shall install gates and no trespassing signs at all private access roads established or improved for the purpose of facility construction and operation if requested by the underlying landowner.<br>[Final Order on ASC, Land Use Condition 18; AMD4] |
| PRE-LU-09 | ~~Before beginning construction, the certificate holder shall record in the real property records of Umatilla County a Covenant Not to Sue with regard to generally accepted farming practices on adjacent farmland.~~<br>~~[Final Order on ASC, Land Use Condition 21]~~ |
| ***STANDARD: RETIREMENT AND FINANCIAL ASSURANCE (RT) [OAR 345-022-0050]*** | |
| PRE-RF-01 | Before beginning construction of the facility, the certificate holder shall submit to the State of Oregon, through the Council, a bond or letter of credit in a form and amount satisfactory to the Council to restore the site to a useful, non-hazardous condition. The certificate holder shall maintain a bond or letter of credit in effect at all times until the facility has been retired. The Council may specify different amounts for the bond or letter of credit during construction and during operation of the facility.<br>[Final Order on ASC, Retirement and Financial Assurance Condition 4]<br>[Mandatory Condition OAR 345-025-0006(8)] |

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| PRE-RF-02 | Before beginning construction of the:<br>a. Wind energy facility components or its related or supporting facilities, the certificate holder shall submit to the State of Oregon, through the Council, a bond or letter of credit naming the State of Oregon, acting by and through the Council, as beneficiary or payee. The initial bond or letter of credit amount for the wind facility components is $~~19.5~~ 3,351,000 million dollars (Q3 2018 dollars), to be adjusted to the date of issuance, and adjusted on an annual basis thereafter, as described in sub-paragraph (2) of this condition:<br>~~b. Solar energy facility components or its related or supporting facilities, the certificate holder shall submit to the State of Oregon, through the Council, a bond or letter of credit naming the State of Oregon, acting by and through the Council, as beneficiary or payee. The initial bond or letter of credit amount for the solar facility components is $9.4 million dollars (Q4 2018 dollars), to be adjusted to the date of issuance, and adjusted on an annual basis thereafter, as described in sub-paragraph (2) of this condition:~~<br>1. The certificate holder may adjust the amount of the initial bond or letter of credit based on the final design configuration of the facility. Any revision to the restoration costs should be adjusted to the date of issuance as described in (2) and subject to review and approval by the Council.<br>2. The certificate holder shall adjust the amount of the bond or letter of credit using the following calculation:<br>i. Adjust the amount of the bond or letter of credit (expressed in Q3 2018 dollars for wind facility ~~components and Q4 2018 dollars for solar facility components)~~) to present value, using the U.S. Gross Domestic Product Implicit Price Deflator, Chain-Weight, as published in the Oregon Department of Administrative Services' "Oregon Economic and Revenue Forecast" or by any successor agency and using the third quarter 2018 index value and the quarterly index value for the date of issuance of the new bond or letter of credit. If at any time the index is no longer published, the Council shall select a comparable calculation to adjust third quarter 2018 dollars to present value.<br>ii. Round the result total to the nearest $1,000 to determine the financial assurance amount.<br>3. The certificate holder shall use an issuer of the bond or letter of credit approved by the Council.<br>4. The certificate holder shall use a form of bond or letter of credit approved by the Council. The certificate holder shall describe the status of the bond or letter of credit in the annual report submitted to the Council under OAR 345-026-0080. The bond or letter of credit shall not be subject to revocation or reduction before retirement of the facility site.<br>[Final Order on ASC, Retirement and Financial Assurance Condition 5; AMD2; AMD4] |

| *STANDARD: FISH AND WILDLIFE HABITAT (FW) [OAR 345-022-0060]* | |
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| PRE-FW-01 | Prior to final site design and facility layout, the certificate holder shall conduct a field-based habitat survey to confirm the habitat categories of all areas that will be affected by facility components, as well as the locations of any sensitive resources such as active raptor and other bird nests. The survey shall be planned in consultation with the department and ODFW, and survey protocols shall be confirmed with the department and ODFW. Following completion of the field survey, and final layout design and engineering, the certificate holder shall provide the department and ODFW a report containing the results of the survey, showing expected final location of all facility components, the habitat categories of all areas that will be affected by facility components, and the locations of any sensitive resources.<br>The report shall also include an updated version of Table FW-1 Potential Temporary and Permanent Impacts by Habitat Category and Type of the final order, showing the acres of expected temporary and permanent impacts to each habitat category, type, and sub-type. The pre-construction survey shall be used to complete final design, facility layout, and micrositing of facility components. As part of the report, the certificate holder shall include its impact assessment methodology and calculations, including assumed temporary and permanent impact acreage for each transmission structure, wind turbine, access road, and all other facility components. If construction laydown yards are to be retained post construction, due to a landowner request or otherwise, the construction laydown yards must be calculated as permanent impacts, not temporary.<br><br>In classifying the affected habitat into habitat categories, the certificate holder shall consult with the department and ODFW. The certificate holder shall not begin construction of the facility until the habitat assessment, categorization, and impact assessment has been approved by the department, in consultation with ODFW. The certificate holder shall not construct any facility components within areas of Category 1 habitat and shall avoid temporary disturbance of Category 1 habitat.<br>[Final Order on ASC, Fish and Wildlife Habitat Condition 1] |
| PRE-FW-02 | Prior to construction, the certificate holder shall finalize and implement the Wildlife Monitoring and Mitigation Plan (WMMP) provided in Attachment F of this order, based on the final facility design, as approved by the department in consultation with ODFW.<br>a. The final WMMP must be submitted and ODOE's concurrence received prior to the beginning of construction. ODOE shall consult with ODFW on the final WMMP. The certificate holder shall implement the requirements of the approved WMMP during all phases of construction and operation of the facility.<br>b. The WMMP may be amended from time to time by agreement of the certificate holder and the Oregon Energy Facility Siting Council ("Council"). Such amendments may be made without amendment of the site certificate. The Council authorizes the Department to agree to amendments to this plan. The Department shall notify the Council of all amendments, and the Council retains the authority to approve, reject, or modify any amendment of the WMMP agreed to by the Department.<br>[Final Order on ASC, Fish and Wildlife Habitat Condition 4] |
| PRE-FW-03 | Prior to construction, the certificate holder shall flag all environmentally sensitive areas as restricted work zones. Restricted work zones shall include but not be limited to areas with sensitive or protected plant species, including candidate species, wetlands and waterways that are not authorized for construction impacts, areas with seasonal restrictions, and active state sensitive species bird nests.<br>[Final Order on ASC, Fish and Wildlife Habitat Condition 8] |

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| PRE-FW-04 | Before beginning construction the certificate holder shall prepare and receive approval from the department of a final Habitat Mitigation Plan. The final Habitat Mitigation Plan shall be based on the final facility design and shall be approved by the department in consultation with ODFW. The Council retains the authority to approve, reject or modify the final HMP.<br>a. The final Habitat Mitigation Plan and the department's approval must be received prior to beginning construction. The department shall consult with ODFW on the final plan. The certificate holder shall implement the requirements of the approved plan during all phases of construction and operation of the facility.<br>b. The certificate holder shall calculate the size of the habitat mitigation area according to the final design configuration of the facility and the estimated areas of habitat affected in each habitat category, in consultation with the department, as per the pre-construction survey results and impact assessment calculations called for in Fish and Wildlife Habitat Condition 1.<br>c. The certificate holder shall acquire the legal right to create, enhance, maintain, and protect the habitat mitigation area, as long as the site certificate is in effect, by means of an outright purchase, conservation easement or similar conveyance and shall provide a copy of the documentation to the department prior to the start of construction. Within the habitat mitigation area, the certificate holder shall improve the habitat quality as described in the final Habitat Mitigation Plan.<br>d. The certificate holder shall provide a habitat assessment of the habitat mitigation area, based on a protocol approved by the Department in consultation with ODFW, which includes methodology, habitat map and available acres by habitat category and subtype in tabular format.<br>e. The final HMP shall include an implementation schedule for all mitigation actions, including securing the conservation easement, conducting the ecological uplift actions at the habitat mitigation area, revegetation and restoration of temporarily impacted areas, and monitoring. The mitigation actions shall be implemented according to the following schedule, as included in the HMP:<br>i. Restoration and revegetation of temporary construction-related impact area shall be conducted as soon as possible following construction.<br>ii. The certificate holder shall obtain legal authority to conduct the required mitigation work at the compensatory habitat mitigation site before commencing construction. The habitat enhancement actions at the compensatory habitat mitigation site shall be implemented concurrent with construction.<br>f. The final HMP shall include a monitoring and reporting program for evaluating the effectiveness of all mitigation actions, including restoration of temporarily impacted areas and ecological uplift actions at the habitat mitigation area.<br>g. The final HMP shall include mitigation in compliance with the Council's Fish and Wildlife Habitat standard, including mitigation for temporary impacts to Category 4 habitat (shrub-steppe habitat); and, mitigation for all Category 2 habitat impacts that meet the mitigation goal of no net loss of habitat quality or quantity, plus a net benefit of habitat quality or quantity.<br>h. The final HMP may be amended from time to time by agreement of the certificate holder and the Oregon Energy Facility Siting Council ("Council"). Such amendments may be made without amendment of the site certificate. The Council authorizes the Department to agree to amendments to this plan. The Department shall notify the Council of all amendments, and the Council retains the authority to approve, reject, or modify any amendment of this plan agreed to by the Department.<br>[Final Order on ASC, Fish and Wildlife Habitat Condition 10] |
| PRE-FW-05 | Before beginning construction, the certificate holder shall prepare and receive approval of a final Revegetation Plan, provided as Attachment E to this order, from the department, in consultation |

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| | with ~~Umatilla and~~ Morrow ~~counties~~ county and ODFW. The certificate holder shall implement the requirements of the approved plan during all phases of construction and operation of the facility.<br>[Final Order on ASC, Fish and Wildlife Habitat Condition 11] |
| ***STANDARD: THREATENED AND ENDANGERED SPECIES (TE) [OAR 345-022-0070]*** | |
| PRE-TE-01 | Prior to construction, the certificate holder shall determine the boundaries of Category 1 Washington ground squirrel habitat. The certificate holder shall hire a qualified professional biologist who has experience in detection of Washington ground squirrel to conduct pre-construction surveys using a survey protocol approved by the department in consultation with ODFW. The biologist shall survey all areas of suitable habitat within 1,000 feet of any ground disturbing activity. Ground disturbing activity refers to any potential impact, whether permanent or temporary. The protocol surveys shall be conducted in the active squirrel season (March 1 to May 31) prior to construction commencement. The protocol survey is valid for three years. If construction begins within three years of conducting the protocol survey, but not within one year of the protocol survey, the certificate holder shall conduct a pre-construction survey only within areas of suitable Washington ground squirrel habitat where ground disturbing activity would occur.<br><br>The certificate holder shall provide written reports of the surveys to the department and to ODFW and shall identify the boundaries of Category 1 Washington ground squirrel (WGS) habitat. The certificate holder shall not begin construction within suitable habitat until the identified boundaries of Category 1 WGS habitat have been approved by the department, in consultation with ODFW.<br><br>The certificate holder shall avoid any permanent or temporary disturbance in all Category 1 WGS habitat. The certificate holder shall ensure that these sensitive areas are correctly marked with exclusion flagging and avoided during construction.<br>[Final Order on ASC, Threatened and Endangered Species Condition 1] |
| PRE-TE-02 | In accordance with Fish and Wildlife Habitat Condition 4, prior to construction, the certificate holder shall finalize and implement the Wildlife Monitoring and Mitigation Plan (WMMP) provided in Attachment F of this order, based on the final facility design, as approved by the department in consultation with ODFW. The final WMMP shall include a program to monitor potential impacts from facility operation on Washington ground squirrel. Monitoring shall be of any known colonies and shall be completed on the same schedule as the raptor nest monitoring for the facility. The monitoring surveys shall include returning to the known colonies to determine occupancy and the extent of the colony as well as a general explanation of the amount of use at the colony. If the colony is not found within the known boundary of the historic location a survey 500 feet out from the known colony will be conducted to determine if the colony has shifted over time. Any new colonies that are located during other monitoring activities, such as raptor nest monitoring surveys, shall be documented and the extent of those colonies should be delineated as well. These newly discovered colonies shall also be included in any future WGS monitoring activities.<br>[Final Order on ASC, Threatened and Endangered Species Condition 2] |
| PRE-TE-03 | To avoid potential impacts to Laurent's milkvetch, the certificate holder must:<br>i. Conduct preconstruction plant surveys for Laurent's milkvetch within 100-feet of temporary and permanent disturbance from all facility components, unless extent of survey area within suitable habitat from temporary and permanent disturbance is otherwise agreed upon by the Department on consultation with Oregon Department of Agriculture. If the species is found to occur, the certificate holder must install protection flagging around the plant population and avoid any ground disturbance within this zone. |

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| | ii. Ensure that any plant protection zone established under (i) above is included on construction plans showing the final design locations.<br>iii. If herbicides are used to control weeds, the certificate holder shall follow the manufacturer's guidelines in establishing a buffer area around confirmed populations of Laurent's milkvetch. Herbicides must not be used within the established buffers.<br>iv. If avoidance cannot be maintained, the certificate holder may request that the Department consider an avoidance exception, authorized through Council concurrence as further described below. The exception request must include an impact assessment and mitigation plan for the affected species including but not be limited to:<br>• Literature review and/or field studies that inform the current status of the species within the survey area or region, if survey area does not contain sufficient information to develop a statistically viable approach for determining impact significance;<br>• A description of the individual(s) or population(s) identified within the survey area that would be avoided and impacted;<br>• An evaluation of facility impacts on the survival or recovery of the species, in accordance with the Threatened and Endangered Species standard;<br>• Proposed mitigation measures such as: funded studies that improve understanding of reproductive biology and pollination; development of seed germination, propagation, and transplanting protocols; and/or, compensatory mitigation project including conservation easement(s) and species propagation, protection, and habitat enhancement measures, and/or other proposed mitigation measures that would benefit the affected species.<br>• The Department's review and determination of the exception request shall be conducted in consultation with the Oregon Department of Agriculture, or a third-party consultant. The Department's determination on the exception request must be concurred with by Council. Council retains authority to reject, modify or concur with the exception request.<br>[Final Order on ASC; AMD3; Threatened and Endangered Species Condition 3; AMD4] |
| ***STANDARD: HISTORIC, CULTURAL, AND ARCHAEOLOGICAL RESOURCES (HC) [OAR 345-022-0090]*** | |
| PRE-HC-01 | Before beginning construction, the certificate holder shall provide to the department a map showing the final design locations of all components of the facility, the areas that will be temporarily disturbed during construction and the areas that were surveyed in 2013-14 for historic, cultural, and archaeological resources.<br>[Final Order on ASC, Historic, Cultural, and Archeological Resources Condition 1] |
| PRE-HC-02 | Before beginning construction, the certificate holder shall mark the buffer areas established under Historic, Cultural, and Archeological Resources Condition 3 for all identified historic, cultural, or archaeological resource sites (including those of unknown age) on construction maps and drawings as "no entry" areas. A copy of current maps and drawings must be maintained onsite during construction and made available to the department upon request.<br>[Final Order on ASC, Historic, Cultural, and Archeological Resources Condition 2] |
| PRE-HC-03 | Before beginning construction, the certificate holder shall ensure that a qualified archeologist, as defined in OAR 736-051-0070, trains construction contractors on how to identify sensitive historic, cultural, and archaeological resources present onsite and on measures to avoid accidental damage to identified resource sites. Records of such training must be maintained onsite during construction, and made available to the department upon request. |

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| | [Final Order on ASC, Historic, Cultural, and Archeological Resources Condition 4] |
| ***STANDARD: PUBLIC SERVICES (PS) [OAR 345-022-0110]*** | |
| PRE-PS-01 | Prior to construction, the certificate holder shall prepare a Traffic Management Plan that includes the procedures and actions described in this order and the mitigation measures identified in ASC Exhibit U, Section 3.5.4. The plan shall be approved by the department in consultation with the appropriate transportation service providers. The plan shall be maintained onsite and implemented throughout construction of the facility.<br><br>In addition, the certificate holder shall include the following information in the plan:<br><br>a. Procedures to provide advance notice to all affected local jurisdictions and adjacent landowners of construction deliveries and the potential for heavy traffic on local roads;<br>b. A policy of including traffic control procedures in contract specifications for construction of the facility;<br>c. Procedures to maintain at least one travel lane at all times to the extent reasonably possible so that roads will not be closed to traffic because of construction vehicles;<br>d. A policy of ensuring that no equipment or machinery is parked or stored on any county road whether inside or outside the site boundary. The certificate holder may temporarily park equipment off the road but within county rights-of-way with the approval of the Morrow County ~~and Umatilla County~~ Public Works Departments;<br>e. A policy to encourage and promote carpooling for the construction workforce; and<br>f. Procedures to keep state highways and county roads free of gravel that may be tracked out on intersecting roads at facility access points.<br>[Final Order on ASC, Public Services Condition 6] |

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| PRE-PS-02 | Before beginning construction, the certificate holder must enter into Road Use Agreements with ~~the~~ Morrow County ~~and Umatilla County~~ Public Works Department. The Agreements must include, at a minimum, a pre-construction assessment of road surfaces under Morrow County ~~and Umatilla County~~ jurisdiction, construction monitoring, and post-construction inspection and repair. A copy of the Road Use Agreements with Morrow County ~~and Umatilla County~~ must be submitted to the department before beginning construction. If required by Morrow County ~~or Umatilla County~~, the certificate holder shall post bonds to ensure funds are available to repair and maintain roads affected by the facility.<br>[Final Order on ASC, Public Services Condition 7] |
| PRE-PS-03 | The certificate holder shall design and construct new access roads and private road improvements to standards approved by ~~Umatilla County or~~ Morrow County. Where modifications of county roads are necessary, the certificate holder shall construct the modifications entirely within the county road rights-of-way and in conformance with county road design standards subject to the approval of the ~~Umatilla County and~~ Morrow County Public Works Departments.<br>[Final Order on ASC, Public Services Condition 8] |
| PRE-PS-04 | Before beginning construction, the certificate holder shall submit to the Federal Aviation Administration (FAA) and the Oregon Department of Aviation an FAA Form 7460-1 Notice of Proposed Construction or Alteration for each turbine. Before beginning construction, the certificate holder shall submit to the department the results of the Oregon Department of Aviation aeronautical study and determination. If the department, in consultation with the Oregon Department of Aviation, determines that any turbine would adversely impact an airport's ability to provide service by obstructing the airport's primary or horizontal surface, the department, in consultation with the Oregon Department of Aviation and the certificate holder, shall determine appropriate mitigation, if any, prior to construction.<br>[Final Order on ASC, Public Services Condition 9] |

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| PRE-PS-05 | Prior to construction, the certificate holder shall prepare an Emergency Management Plan that includes the procedures and actions described in this order and in ASC Exhibit U. The certificate holder shall submit the plan to ODOE for review and approval in consultation with the appropriate local fire protection districts (including the City of Heppner Volunteer Fire Department, and Ione Rural Fire Protection District, ~~and Echo Rural Fire Protection District~~) prior to construction. The plan shall be maintained onsite and implemented throughout construction and operation of the facility. Any updates to the plan shall be provided to the department within 30 days. All onsite workers shall be trained on the fire prevention and safety procedures contained in the plan prior to working on the facility.<br><br>Additional information that shall be included in the plan:<br>a. Current contact information of at least two facility personnel available to respond on a 24-hour basis in case of an emergency on the facility site. The contact information must include name, telephone number(s), physical location, and email address for the listed contact(s). An updated list must be provided to the fire protection agencies immediately upon any change of contact information. A copy of the contact list, and any updates as they occur, must also be provided to the Department, along with a list of the agencies that received the contact information.<br>b. Identification of agencies that participated in developing the plan;<br>c. Identification of agencies that are designated as first response agencies or are included in any mutual aid agreements with the facility;<br>d. A list of any other mutual aid agreements or fire protection associations in the vicinity of the facility;<br>e. Contact information for each agency listed above;<br>f. Communication protocols for both routine and emergency events and the incident command system to be used in the event a fire response by multiple agencies is needed at the facility;<br>g. Access and fire response at the facility site during construction and operations. Fire response plans during construction should address regular and frequent communication amongst the agencies regarding the number and location of construction sites within the site boundary, access roads that are completed and those still under construction, and a temporary signage system until permanent addresses and signs are in place;<br>h. The designated meeting location in case of evacuation;<br>i. Staff training requirements; and<br>Copies of mutual aid, fire protection association, or other agreements entered into concerning fire protection at the facility site.<br>[Final Order on ASC, Public Services Condition 13] |
| PRE-PS-06 | Before beginning construction, the certificate holder shall develop and implement, or require its contractors to develop and implement, a site health and safety plan that informs workers and others onsite about first aid techniques and what to do in case of an emergency. The health and safety plan will include preventative measures, important telephone numbers, the locations of onsite fire extinguishers, and the names, locations and contact information of nearby hospitals. All onsite workers shall be trained in safety and emergency response, as per the site health and safety plan. The site health and safety plan must be updated on an annual basis, maintained throughout the construction and operations and maintenance phases of the facility, and available upon request by the department.<br>[Final Order on ASC, Public Services Condition 20] |

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| PRE-PS-07 | Before beginning construction, the certificate holder shall ensure that all construction workers are certified in first aid, cardio pulmonary resuscitation (CPR), and the use of an automated external defibrillator (AED). The certificate holder must retain records of the certifications and provide them to the department upon request. The certificate holder shall also ensure that an AED is available onsite at all times that construction activities are occurring.<br>[Final Order on ASC, Public Services Condition 21] |
| ***STANDARD: WASTE MINIMIZATION (WM,) [OAR 345-022-0120]*** | |
| PRE-WM-01 | Prior to construction, the certificate holder shall develop a construction waste management plan, to be implemented during all phases of facility construction, which includes at a minimum the following details:<br>a. Specification of the number and types of waste containers to be maintained at construction sites and construction yards<br>b. Description of waste segregation methods for recycling or disposal.<br>c. Names and locations of appropriate recycling and waste disposal facilities, collection requirements, and hauling requirements to be used during construction.<br><br>The certificate holder shall maintain a copy of the construction waste management plan onsite and shall provide to the department a report on plan implementation in the 6-month construction report required pursuant to OAR 345-026-0080(1)(a).<br>[Final Order on ASC, Waste Minimization Condition 2] |
| PRE-WM-02 | Prior to construction, the certificate holder shall investigate and confirm that no surfaces waters, shallow groundwater, or drinking water sources will be adversely impacted by the usage of concrete washout water in the foundations of facility components, and shall submit an investigation report to the department. Prior to construction, the department, in consultation with DEQ, shall review the results of the investigation report and shall verify that the plan to dispose of concrete washout water in the foundations of facility components is unlikely to adversely impact surface waters, shallow groundwater, or drinking water sources. The applicant's investigation shall be based on the anticipated final facility layout and design. If the results of the investigation show that the proposed concrete washout water disposal method would cause adverse impacts to surface water, shallow groundwater, or drinking water sources, the applicant shall propose mitigation measures to reduce potential impacts, for review and approval by the department in consultation with DEQ, prior to construction.<br>[Final Order on ASC, Waste Minimization Condition 3] |
| ***STANDARD: SITING STANDARDS FOR TRANSMISSION LINES (TL) [OAR 345-024-0090]*** | |
| PRE-TL-01 | Prior to construction, the certificate holder shall schedule a time to brief the OPUC Safety, Reliability, and Security Division (Safety) Staff as to how it will comply with OAR Chapter 860, Division 024 during design, construction, operations, and maintenance of the facilities.<br>[Final Order on ASC, Siting Standard Condition 2] |

| ***STANDARD: NOISE CONTROL REGULATION (NC) [OAR 345-035-0035]*** | |
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| PRE-NC-01 | Prior to construction, the certificate holder shall provide to the department:<br>a. Information that identifies the final design locations of all facility components to be built at the facility;<br>b. The maximum sound power level for the facility components and the maximum sound power level and octave band data for the turbine type(s), transformers (substation ~~and solar array~~), invertors, ~~AC- and DC-coupled~~ battery storage cooling system selected for the facility based on manufacturers' warranties or confirmed by other means acceptable to the department;<br>c. The results of the noise analysis of the final facility design performed in a manner consistent with the requirements of OAR 340-035-0035(1)(b)(B) (iii)(IV) and (VI). The analysis must demonstrate to the satisfaction of the department that the total noise generated by the facility ~~(including turbines, transformers, invertors, AC- and DC-coupled battery storage cooling systems)~~ would meet the ambient noise degradation test and maximum allowable test at the appropriate measurement point for all potentially-affected noise sensitive properties, or that the certificate holder has obtained the legally effective easement or real covenant for expected exceedances of the ambient noise degradation test described (d) below. The analysis must also identify the noise reduction operation (NRO) mode approach that will be used during facility operation and include a figure that depicts the turbines that will be operating in NRO mode and the associated dBA reduction level; if required to meet the maximum allowable decibel threshold of 50 dBA; and,<br>d. For each noise-sensitive property where the certificate holder relies on a noise waiver to demonstrate compliance in accordance with OAR 340-035-0035(1)(b)(B)(iii)(III), a copy of the legally effective easement or real covenant pursuant to which the owner of the property authorizes the certificate holder's operation of the facility to increase ambient statistical noise levels $L_{10}$ and $L_{50}$ by more than 10 dBA at the appropriate measurement point. The legally effective easement or real covenant must: include a legal description of the burdened property (the noise sensitive property); be recorded in the real property records of the county; expressly benefit the property on which the wind energy facility is located; expressly run with the land and bind all future owners, lessees or holders of any interest in the burdened property; and not be subject to revocation without the certificate holder's written approval.<br>[Final Order on ASC; AMD3; Noise Control Condition 2] |

### 4.4 Construction (CON) Conditions

| Condition Number | Construction (CON) Conditions |
|---|---|
| ***STANDARD: SOIL PROTECTION (SP) [OAR 345-022-0022]*** | |
| CON-SP-01 | During construction, the certificate holder shall conduct all work in compliance with a final Erosion and Sediment Control Plan (ESCP) that is satisfactory to the Oregon Department of Environmental Quality as required under the National Pollutant Discharge Elimination System Construction Stormwater Discharge General Permit 1200-C.<br>[Final Order on ASC, Soil Protection Condition 1] |
| CON-SP-02 | During construction, the erosion and sediment control best management practices and measures as described in ASC Exhibit I, Section 5.2 and listed in the final order approving the site certificate shall be included and implemented as part of the final ESCP.<br>[Final Order on ASC, Soil Protection Condition 2] |
| ***STANDARD: LAND USE (LU) [OAR 345-022-0030]*** | |
| CON-LU-01 | During construction, the certificate holder shall comply with the following requirements:<br>a. Construction vehicles shall use previously disturbed areas including existing roadways and tracks.<br>b. Temporary construction yards and laydown areas shall be located within the future footprint of permanent structures to the extent practicable.<br>c. New, permanent roadways will be the minimum width allowed while still being consistent with safe use and satisfying county road and safety standards.<br>d. Underground communication and electrical lines will be buried within the area disturbed by temporary road widening to the extent practicable.<br>[Final Order on ASC, Land Use Condition 8] |
| CON-LU-02 | During construction, the certificate holder shall install smooth turbine tower structures and turbine nacelles that lack perching or nesting opportunities for birds.<br>[Final Order on ASC, Land Use Condition 17] |
| CON-LU-03 | During construction, the certificate holder shall install the electrical cable collector system underground, where practicable. In agricultural areas, the collector system lines must be installed at a depth of 3 feet or deeper as necessary to prevent adverse impacts on agriculture operations. In all other areas, the collector system lines must be installed a minimum of 3 feet where practicable.<br>[Final Order on ASC, Land Use Condition 19] |
| ***STANDARD: FISH AND WILDLIFE HABITAT (FW) [OAR 345-022-0060]*** | |
| CON-FW-01 | ~~No construction shall occur in mule deer winter range during winter, defined as December 1 to March 31. Mule deer winter range is based on data to be provided by ODFW at the time of construction. Upon request by the certificate holder, the Department may provide exceptions to this restriction. The certificate holder's request must include a justification for the request including any actions the certificate holder will take to avoid, minimize or mitigate impacts to mule deer winter range during winter in the relevant area. The Department will consult with ODFW on any request made under this condition.~~<br>~~[Final Order on ASC, Fish and Wildlife Habitat Condition 3; AMD4]~~ |

<table>
<tr>
<td>CON-FW-02</td>
<td>Prior to construction, the certificate holder shall develop a construction plan that demonstrates construction activities within 0.25-mile of previously identified active nest sites are scheduled to avoid the sensitive nesting and breeding season. Previously identified active nest sites are those identified through the pre-construction raptor nest survey as required through Condition PRE-FW-01 and may also include any previously identified active nest sites from previous surveys.<br><br>During construction within the time periods listed below, the certificate holder shall implement buffer zones around active nest sites of the species listed below. Active nest sites shall be identified based on the Condition PRE-FW-01 pre-construction nest survey and be monitored during construction by a biological monitor, both of which shall be based on a protocol approved by the Department in consultation with ODFW- specifying methodology and frequency of monitoring. No ground-disturbing activities within the buffer zone shall occur during the seasonal restrictions. The construction workforce and facility employees must be provided maps with the locations of the buffer zones and be instructed to avoid ground-disturbing activity within the buffer zone during construction activities.<br><br>
<table>
<tr><th>Sensitive Status Species</th><th>Buffer Size (Radius Around Nest Site):</th><th>Sensitive Nesting and Breeding Season :</th></tr>
<tr><td>Western burrowing owl</td><td>0.25 mile</td><td>April 1 to August 15</td></tr>
<tr><td>Ferruginous hawk</td><td>0.25 mile</td><td>March 15 to August 15</td></tr>
<tr><td>Swainson’s hawk</td><td>0.25 mile</td><td>April 1 to August 15</td></tr>
</table>
<br>If avoidance within the buffer restrictions cannot be maintained, the certificate holder may request approval from the Department in consultation with ODFW on a mitigation and conservation strategy for condition compliance.<br>[Final Order on ASC; AMD3 Fish and Wildlife Habitat Condition 5; AMD4]</td>
</tr>
<tr>
<td>CON-FW-03</td>
<td>During construction, the certificate holder shall employ a qualified environmental professional to provide environmental training to all personnel prior to working onsite, related to sensitive species present onsite, precautions to avoid injuring or destroying wildlife or sensitive wildlife habitat, exclusion areas, permit requirements and other environmental issues. All personnel shall be given clear maps showing areas that are off-limits for construction, and shall be prohibited from working outside of the areas in the site boundary that have been surveyed and approved for construction. The certificate holder shall instruct construction personnel to report any injured or dead wildlife detected while on the site to the appropriate onsite environmental manager. Records of completed training shall be maintained onsite and made available to the department upon request.<br>[Final Order on ASC, Fish and Wildlife Habitat Condition 7]</td>
</tr>
<tr>
<td>CON-FW-04</td>
<td>During construction, the certificate holder shall employ at a minimum one environmental inspector to be onsite daily. The environmental inspector shall oversee permit compliance and construction, and ensure that known sensitive environmental resources are protected. The environmental inspector shall prepare a weekly report during construction, documenting permit compliance and documenting any corrective actions taken. Reports shall be kept on file and available for inspection by the department upon request.<br>[Final Order on ASC, Fish and Wildlife Habitat Condition 9]</td>
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| *STANDARD: HISTORIC, CULTURAL, AND ARCHAEOLOGICAL RESOURCES (HC) [OAR 345-022-0090]* | |
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| CON-HC-01 | Prior to construction activities, the certificate holder must flag or otherwise mark a 200-foot avoidance buffer around historic archaeological sites, as identified by the maps and drawings prepared in accordance with Historic, Cultural, and Archeological Resources Conditions 1 and 2. No disturbance is allowed within the buffer zones, unless resources assumed likely NRHP eligible (e.g. 6B2H-MC-ISO-17, WRII-BB-IS-01, WRII-DM-04) are concurred not likely NRHP eligible through SHPO review; or, a Historic, Cultural, and Archaeological Resources mitigation plan is submitted and accepted by the Department and SHPO which includes measures such as: additional archival and literature review; video media publications; public interpretation funding; or other form of compensatory mitigation deemed appropriate by the Department, in consultation with SHPO. For historic archaeological sites, an archeological monitor must be present if construction activities are required within 200-feet of sites identified as potentially eligible for listing on the National Register of Historic Places (NRHP) unless otherwise agreed to by the Department and SHPO. The certificate holder may use existing private roads within the buffer areas but may not widen or improve private roads within the buffer areas. The no-entry restriction does not apply to public road rights-of-way within buffer areas. Flagging or marking must be removed immediately upon cessation of activities in the area that pose a threat of disturbance to the site being protected.<br>[Final Order on ASC, Historic, Cultural, and Archeological Resources Condition 3; AMD4] |

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| CON-HC-02 | During construction, the certificate holder shall ensure that construction personnel cease all ground-disturbing activities in the immediate area if any archeological or cultural resources are found during construction of the facility until a qualified archeologist can evaluate the significance of the find. The certificate holder shall notify the department and the Oregon State Historic Preservation Office (SHPO) of the find. If ODOE, in consultation with SHPO, determines that the resource meets the definition of an archaeological object, archaeological site, or is eligible or likely to be eligible for listing on the (NRHP), the certificate holder shall, in consultation with the department, SHPO, interested Tribes and other appropriate parties, make recommendations to the Council for mitigation, including avoidance, field documentation and data recovery. The certificate holder shall not restart work in the affected area until the department, in consultation with SHPO, agree that the certificate holder has demonstrated that it has complied with archeological resources protection regulations.<br>[Final Order on ASC, Historic, Cultural, and Archeological Resources Condition 5] |
| ***STANDARD: PUBLIC SERVICES (PS) [OAR 345-022-0110]*** | |
| CON-PS-01 | During construction, the certificate holder shall include the following additional measures in the construction waste management plan required by Waste Minimization Condition 2:<br>a. Recycling steel and other metal scrap.<br>b. Recycling wood waste.<br>c. Recycling packaging wastes such as paper and cardboard.<br>d. Collecting non-recyclable waste for transport to a local landfill by a licensed waste hauler or by using facility equipment and personnel to haul the waste. Waste hauling by facility personnel within Morrow County shall be performed in compliance with the Morrow County Solid Waste Management Ordinance, which requires that all loads be covered and secured.<br>e. Segregating all hazardous and universal wastes such as used oil, oily rags and oil-absorbent materials, mercury-containing lights and lead-acid and nickel-cadmium batteries for disposal by a licensed firm specializing in the proper recycling or disposal of hazardous and universal wastes.<br>f. Discharging concrete truck rinse-out within foundation holes, completing truck wash-down off-site, and burying other concrete waste as fill on-site whenever possible.<br>[Final Order on ASC, Public Services Condition 3] |
| CON-PS-02 | During construction of the facility, the certificate holder shall provide for 24-hour on-site security, and shall establish effective communications between on-site security personnel and the Morrow County Sheriff's Office ~~and Umatilla County Sheriff's Office~~.<br>[Final Order on ASC, Public Services Condition 10] |
| CON-PS-03 | During construction of the facility, the certificate holder shall ensure that turbine construction personnel are trained and equipped for fall protection, high angle, and confined space rescue. The certificate holder must retain records of the training and provide them to the department upon request.<br>[Final Order on ASC, Public Services Condition 14] |
| CON-PS-04 | During construction, the certificate holder shall design turbines to be constructed on concrete pads with a minimum of 10 feet of nonflammable and non-erosive ground cover on all sides. The certificate holder shall cover turbine pad areas with nonflammable, non-erosive material immediately following exposure during construction and shall maintain the pad area covering during facility operation.<br>[Final Order on ASC, Public Services Condition 16] |

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| CON-PS-05 | During construction the certificate holder must maintain an area clear of vegetation for fire prevention around construction sites, including turbines and towers and any areas where work includes welding, cutting, grinding, or other flame- or spark-producing operations.<br>[Final Order on ASC, Public Services Condition 17] |
| ***STANDARD: WASTE MINIMIZATION (WM) [OAR 345-022-0120]*** | |
| CON-WM-01 | During construction, the certificate holder shall require construction contractors to complete the following for any off-site disposal of excess soil during construction activities:<br>a. Obtain and provide the certificate holder with a signed consent agreement between contractor and the party receiving the earth materials authorizing the acceptance and disposal of the excess soil; and,<br>b. Confirm that all disposal sites have been inspected and approved by the certificate holder's environmental personnel to ensure that sensitive environmental resources, such as wetlands or high quality habitats, would not be impacted.<br>The certificate holder shall maintain copies of all signed consent agreements and disposal site inspection and approvals onsite and shall provide to the department in the 6-month construction report required pursuant to OAR 345-026-0080(1)(a).<br>[Final Order on ASC, Waste Minimization Condition 1] |
| ***STANDARD: PUBLIC HEALTH AND SAFETY FOR WIND FACILITIES (WF) [OAR 345-024-0010]*** | |
| CON-WF-01 | During construction, the certificate holder shall install pad-mounted step-up transformers at the base of each tower in steel boxes designed to protect the public from electrical hazards.<br>[Final Order on ASC, Public Health and Safety Standards for Wind Facilities Condition 1] |
| CON-WF-02 | Prior to and during operations the certificate holder shall:<br>a. Install and maintain self-monitoring devices on each turbine, linked to sensors at the operations and maintenance building, connected to a fault annunciation panel or supervisory control and data acquisition (SCADA) system to alert operators to potentially dangerous conditions.<br>b. The certificate holder shall maintain automatic equipment protection features in each turbine that would shut down the turbine and reduce the chance of a mechanical problem causing a fire. The certificate holder shall immediately remedy any dangerous conditions.<br>c. Submit to the Department materials or other documentation demonstrating the facility's operational safety-monitoring program and cause analysis program, for review and approval. The program shall, at a minimum, include requirements for regular turbine blade and turbine tower component inspections and maintenance, based on wind turbine manufacturer recommended frequency.<br>d. The certificate holder shall document inspection and maintenance activities including but not limited to date, turbine number, inspection type (regular or other), turbine tower and blade condition, maintenance requirements (i.e. equipment used, component repair or replacement description, impacted area location and size), and wind turbine operating status. This information shall be submitted to the Department pursuant to OAR 345-026-0080 in the facility's annual compliance report.<br>e. In the event of blade or tower failure, the certificate holder shall report the incident to the Department within 72 hours, in accordance with OAR 345-026-0170(1), and shall, within 90-days of blade or tower failure event, submit a cause analysis to the Department for its compliance evaluation.<br>[Final Order on ASC;AMD3; Public Health and Safety Standards for Wind Facilities Condition 4] |

| ***STANDARD: SITING STANDARDS FOR TRANSMISSION LINES (TL) [OAR 345-024-0090]*** | |
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| CON-TL-01 | During construction, the certificate holder shall take reasonable steps to reduce or manage human exposure to electromagnetic fields and submit verification to the Department, including:<br><br>a. Constructing all aboveground collector and transmission lines at least 200 feet from any residence or other occupied structure, measured from the centerline of the transmission line.<br>b. Constructing all aboveground 34.5-kV transmission lines with a minimum clearance of 25 feet from the ground.<br>~~c. Constructing all aboveground 230-kV transmission lines with a minimum clearance of 30 feet from the ground.~~<br>d. Developing and implementing a program that provides reasonable assurance that all fences, gates, cattle guards, trailers, irrigation systems, or other objects or structures of a permanent nature that could become inadvertently charged with electricity are grounded or bonded throughout the life of the line (OAR 345-025-0010(4)).<br>e. Providing to landowners a map of underground, with any applicable NESC demarking for underground facilities, and overhead transmission lines on their property and advising landowners of possible health and safety risks from induced currents caused by electric and magnetic fields.<br>f. Designing and maintaining all transmission lines so that alternating current electric fields do not exceed 9 kV per meter at one meter above the ground surface in areas accessible to the public.<br>g. Increasing the ~~intraconnection~~ transmission line height, shielding the electric field, or installing access barriers, if needed, to prevent induced current and nuisance shock of mobile vehicles.<br>h. Designing and maintaining all transmission lines so that induced voltages during operation are as low as reasonably achievable.<br>i. Designing, constructing and operating the transmission line in accordance with the requirements of the version of the National Electrical Safety Code that is most current at the time that final engineering of each of these components is completed (OAR 345-025-0010(4)).<br>j. Implement a safety protocol to ensure adherence to NESC grounding requirements<br>[Final Order on ASC, Siting Standard Condition 1; AMD4] |

| *STANDARD: NOISE CONTROL REGULATION (NC) [OAR 345-035-0035]* | |
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| CON-NC-01 | During construction, to reduce construction noise impacts at nearby residences, the certificate holder shall:<br>a. Establish and enforce construction site and access road speed limits;<br>b. Utilize electrically-powered equipment instead of pneumatic or internal combustion powered equipment, where feasible;<br>c. Locate material stockpiles and mobile equipment staging, parking, and maintenance areas as far as practicable away from noise sensitive properties;<br>d. Utilize noise-producing signals, including horns, whistles, alarms, and bells for safety warning purposes only;<br>e. Equip all noise-producing construction equipment and vehicles using internal combustion engines with mufflers, air-inlet silencers where appropriate, and any other shrouds, shields, or other noise-reducing features in good operating condition that meet or exceed original factory specification. Mobile or fixed "package" equipment (e.g., arc-welders, air compressors) shall be equipped with shrouds and noise control features that are readily available for that type of equipment; and,<br>f. Establish a noise complaint response system. All construction noise complaints will be logged within 48 hours of issuance. The construction supervisor shall have the responsibility and authority to receive and resolve noise complaints. A clear appeal process to the owner shall be established prior to the start of construction that will allow for resolution of noise problems that cannot be resolved by the site supervisor in a reasonable period of time. Records of noise complaints during construction must be made available to authorized representatives of the department upon request.<br>[Final Order on ASC, Noise Control Condition 1] |

## 4.5 Pre-Operational (PRO) Conditions

| Condition Number | Pre-Operational (PRO) Conditions |
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| ***STANDARD: SOIL PROTECTION (SP) [OAR 345-022-0022]*** | |
| PRO-SP-01 | Prior to beginning facility operation, the certificate holder shall provide the Department a copy of an operational SPCC plan, if required per DEQ's Hazardous Waste Program. If an SPCC plan is not required, the certificate holder shall prepare and submit to the Department for review and approval an operational Spill Prevention and Management plan. The Spill Prevention and Management Plan shall include at a minimum the following procedures and BMPs:<br>• Procedures for oil and hazardous material emergency response consistent with OAR 340, Division 100-122 and 142<br>• Procedures demonstrating compliance with all applicable local, state, and federal environmental laws and regulations for handling hazardous materials used onsite in a manner that protects public health, safety, and the environment<br>• Current inventory (type and quantity) of all hazardous materials stored onsite, specifying the amounts at each ~~O&M building,~~ substation and battery storage system components<br>• Restriction limiting onsite storage of diesel fuel or gasoline<br>• Requirement to store lubricating and dielectric oils in quantities equal to or greater than 55-gallons in qualified oil-filled equipment<br>• Preventative measures and procedures to avoid spills<br>o Procedures for chemical storage<br>o Procedures for chemical transfer<br>o Procedures for chemical transportation<br>o Procedures for fueling and maintenance of equipment and vehicles<br>o Employee training and education<br>• Clean-up and response procedures, in case of an accidental spill or release<br>• Proper storage procedures<br>• Reporting procedures in case of an accidental spill or release<br>[Final Order on ASC, Soil Protection Condition 5; AMD2] |
| ***STANDARD: PUBLIC SERVICES (PS) [OAR 345-022-0110]*** | |
| PRO-PS-01 | Prior to operation of the facility, the certificate holder shall ensure that operations personnel are trained and equipped for fall protection and tower rescue, including high angle and confined space rescue. Refresher training in high angle and confined space rescue must be provided to operations personnel on an annual basis throughout the operational life of the facility. The certificate holder must retain records of the training and provide them to the department upon request.<br>[Final Order on ASC, Public Services Condition 15] |
| PRO-PS-02 | Before beginning operation of the facility, the certificate holder must provide a final site plan to the identified fire protection districts and first-responders included in the Emergency Management Plan. The certificate holder must indicate on the site plan the identification number assigned to each turbine and the actual location of all facility structures. The certificate |

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| | holder shall provide an updated site plan if additional turbines or other structures are later added to the facility.<br>[Final Order on ASC, Public Services Condition 19] |
| PRO-PS-03 | Prior to operation, the certificate holder must ensure that operations personnel remain current in their first aid/CPR/AED certifications throughout the operational life of the facility. The certificate holder must retain records of the certifications and provide them to the department upon request. The certificate holder shall also ensure that an AED is available onsite at all times that operations and maintenance personnel are at the facility.<br>[Final Order on ASC, Public Services Condition 22 |

## 4.6 Operational (OPR) Conditions

| Condition Number | Operational (OPR) Conditions |
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| ***STANDARD: GENERAL STANDARD OF REVIEW (GS) [OAR 345-022-0000]*** | |
| OPR-GS-01 | The certificate holder shall submit a legal description of the site to the Oregon Department of Energy within 90 days after beginning operation of the facility. The legal description required by this rule means a description of metes and bounds or a description of the site by reference to a map and geographic data that clearly and specifically identify the outer boundaries that contain all parts of the facility.<br>[Final Order on ASC, Mandatory Condition 1] [OAR 345-025-0006(2)]] |
| ***STANDARD: SOIL PROTECTION (SP) [OAR 345-022-0022]*** | |
| OPR-SP-01 | During facility operation, the certificate holder shall:<br>a. Routinely inspect and maintain all facility components including roads, pads, and other facility components and, as necessary, maintain or repair erosion and sediment control measures and reduce potential facility contribution to erosion.<br>b. Restrict vehicles to constructed access roads, and ensure material laydown or other maintenance activities occur within graveled areas or within the maintenance area of the O&M buildings to avoid unnecessary compaction, erosion, or spill risk to the area surrounding the facility.<br>c. If in order to serve the operational needs of the energy facility, or related and supporting facilities, the certificate holder intends to substantially modify an existing road or construct a new road, the certificate holder must submit and receive Council approval of an amendment to the site certificate prior to the modification or construction.<br>[Final Order on ASC, Soil Protection Condition 6] |
| ***STANDARD: LAND USE (LU) [OAR 345-022-0030]*** | |
| OPR-LU-01 | Within one month of commencement of commercial operation, the certificate holder shall submit an as-built survey for each construction phase that demonstrates compliance with the setback requirements in Land Use Condition 1 to the department and Morrow County.<br>[Final Order on ASC, Land Use Condition 2] |
| OPR-LU-02 | During operation of the facility, the certificate holder shall restore areas that are temporarily disturbed during facility maintenance or repair activities using the same methods and monitoring procedures described in the final Revegetation Plan referenced in Fish and Wildlife Habitat Condition 11.<br>[Final Order on ASC, Land Use Condition 10] |
| OPR-LU-03 | Before beginning decommissioning activities, the certificate holder must provide a copy of the final retirement plan to Morrow County ~~and Umatilla County~~.<br>[Final Order on ASC, Land Use Condition 23] |
| OPR-LU-04 | Before beginning electrical production, the certificate holder shall prepare an Operating and Facility Maintenance Plan (Plan) and submit the Plan to the department for approval in consultation with ~~Umatilla and~~ Morrow County~~ies~~.<br>[Final Order on ASC, Land Use Condition 25] |

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| OPR-LU-05 | ~~Within 90 days of the commencement of electrical service from Wheatridge East, the certificate holder shall provide a summary of as-built changes to the department and Umatilla County.~~<br>~~[Final Order on ASC, Land Use Condition 26]~~ |
| OPR-LU-06 | Prior to facility retirement, the certificate holder must include the following minimum restoration activities in the proposed final retirement plan it submits to the Council pursuant to OAR 345-027-0110 or its equivalent:<br>1. Dismantle turbines, towers, pad mounted transformers, meteorological towers and related aboveground equipment, and remove concrete pads to a depth of at least three feet below the surface grade.<br>2. Remove underground collection and communication cables that are buried less than three feet in depth and are deemed by Council to be a hazard or a source of interference with surface resource uses.<br>3. Remove gravel from areas surrounding turbine pads.<br>4. Remove and restore private access roads unless the landowners directs otherwise.<br>5. Following removal of facility components, grade disturbed areas as close as reasonably possible to the original contours and restore soils to a condition compatible with farm uses or other resources uses.<br>6. Revegetate disturbed areas in consultation with the land owner and in a manner consistent with the final Revegetation Plan referenced in Fish and Wildlife Habitat Condition 11.<br>7. If the landowner wishes to retain certain facilities, provide a letter from the land owner that identifies the roads, cleared pads, fences, gates and other improvements to be retained and a commitment from the land owner to maintain the identified facilities for farm or other purposes permitted under the applicable zone.<br>[Final Order on ASC, Land Use Condition 27] |
| ***STANDARD: RETIREMENT AND FINANCIAL ASSURANCE (RT) [OAR 345-022-0050]*** | |
| OPR-RF-01 | During facility operation, the certificate holder shall:<br>(a) Conduct monthly inspections of the battery storage systems, in accordance with manufacturer specifications. The certificate holder shall maintain documentation of inspections, including any corrective actions, and shall submit copies of inspection documentation in its annual report to the Department.<br>(b) Provide evidence in its annual report to the Department of active property coverage under its commercial business insurance from high loss-catastrophic events, including but not limited to, onsite fire or explosion.<br>[Final Order on AMD2, Retirement and Financial Assurance Condition 6] |
| ***STANDARD: PUBLIC SERVICES (PS) [OAR 345-022-0110]*** | |
| OPR-PS-01 | ~~During operation of the facility, the certificate holder shall discharge sanitary wastewater generated at the O&M buildings to licensed on-site septic systems in compliance with State permit requirements. The certificate holder shall design each septic system for a discharge capacity of less than 2,500 gallons per day.~~<br>~~[Final Order on ASC, Public Services Condition 1]~~ |
| OPR-PS-02 | Except as provided in this condition, during facility operation, the certificate holder shall obtain water for on-site uses from on-site wells located near the O&M buildings. The certificate holder shall construct on-site wells subject to compliance with the provisions of ORS 537.765 relating to keeping a well log. The certificate holder shall not use more than 5,000 gallons of water per day from each of the two on-site wells. The certificate holder may obtain water from other sources for on-site uses subject to prior approval by the Department. |

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| | [Final Order on ASC, Public Services Condition 2] |

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| OPR-PS-03 | (a) Prior to operation, the certificate holder shall submit to the Department for approval its Operational Waste Management Plan that includes but is not limited to the following:<br>1. Onsite handling procedure for operational replacement of damaged, defective or recalled lithium-ion batteries. The procedure shall identify applicable 49 CFR 173.185 provisions and address, at a minimum, onsite handling, packaging, interim storage, and segregation requirements.<br>2. Training employees to handle, replace, and store damaged, defective or recalled lithium-ion batteries; minimize and recycle solid waste.<br>3. Recycling paper products, metals, glass, and plastics.<br>4. Recycling used oil and hydraulic fluid.<br>5. Collecting non-recyclable waste for transport to a local landfill by a licensed waste hauler or by using facility equipment and personnel to haul the waste. Waste hauling by facility personnel within Morrow County shall be performed in compliance with the Morrow County Solid Waste Management Ordinance, Section 5.000 Public Responsibilities, 5.010 Transportation of Solid Waste and 5.030 Responsibility for Propose Disposal of Hazardous Waste which requires that all loads be covered and secured and that operators be responsible for hazardous waste disposal in accordance with applicable regulatory requirements.<br>6. Segregating all hazardous and universal, non-recyclable wastes such as used oil, oily rags and oil-absorbent materials, mercury-containing lights, lithium-ion batteries, lead-acid and nickel-cadmium batteries, and replaced, damaged, defective or recalled lithium-ion batteries for disposal by a licensed firm specializing in the proper recycling or disposal of hazardous and universal wastes.<br>(b) During operation, the certificate holder shall implement the approved Operational Waste Management Plan.<br>[Final Order on ASC, Public Services Condition 4; AMD2] |
| OPR-PS-04 | During operation, the certificate holder shall ensure that appropriate law enforcement agency personnel have an up-to-date list of the names and telephone numbers of facility personnel available to respond on a 24-hour basis in case of an emergency at the facility site.<br>[Final Order on ASC, Public Services Condition 12] |
| ***STANDARD: PUBLIC HEALTH AND SAFETY FOR WIND FACILITIES (WF) [OAR 345-024-0010]*** | |
| OPR-WF-01 | During operation, the certificate holder shall ensure the ~~each~~ facility substation and battery storage systems are enclosed with appropriate fencing and locked gates to protect the public from electrical hazards.<br>[Final Order on ASC, Public Health and Safety Standards for Wind Facilities Condition 2; AMD2] |

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|---|---|
| ***STANDARD: SITING STANDARDS FOR TRANSMISSION LINES (TL) [OAR 345-024-0090]*** | |
| OPR-TL-01 | During operation, the certificate holder shall:<br>(1) Update the OPUC Safety Staff as to how the operator will comply with OAR Chapter 860, Division 024 on an ongoing basis considering future operations, maintenance, emergency response, and alterations until facility retirement.<br>(2) File the following required information with the Commission:<br>a. 758.013 Operator of electric power line to provide Public Utility Commission with safety information; availability of information to public utilities. (1) Each person who is subject to the Public Utility Commission's authority under ORS 757.035 and who engages in the operation of an electric power line as described in ORS 757.035 must provide the commission with the following information before January 2 of each even-numbered year:<br>i. The name and contact information of the person that is responsible for the operation and maintenance of the electric power line, and for ensuring that the electric power line is safe, on an ongoing basis; and<br>ii. The name and contact information of the person who is responsible for responding to conditions that present an imminent threat to the safety of employees, customers and the public.<br>iii. In the event that the contact information described in subsection (1) of this section changes or that ownership of the electric power line changes, the person who engages in the operation of the electric power line must notify the commission of the change as soon as practicable, but no later than within 90 days.<br>iv. If the person described in subsection (1) of this section is not the public utility, as defined in ORS 757.005, in whose service territory the electric power line is located, the commission shall make the information provided to the commission under subsection (1) of this section available to the public utility in whose service territory the electric power line is located. [2013 c.235 §3]<br>(3) Provide OPUC Safety Staff with:<br>a. Maps and Drawings of routes and installation of electrical supply lines showing:<br>• Transmission lines and structures (over 50,000 Volts)<br>• Distribution lines and structures - differentiating underground and overhead lines (over 600 Volts to 50,000 Volts)<br>• Substations, roads and highways<br>• Plan and profile drawings of the transmission lines (and name and contact information of responsible professional engineer).<br>[Final Order on ASC, Siting Standard Condition 3] |
| ***STANDARD: NOISE CONTROL REGULATION (NC) [OAR 345-035-0035]*** | |
| OPR-NC-01 | During operation of the facility, if required to meet the maximum allowable decibel threshold of 50 dBA, the certificate holder shall only operate the facility in the NRO mode that is identified prior to construction pursuant to Noise Control Condition 2. After beginning operation of the facility, the certificate holder shall include a certification in its annual Compliance Report that the NRO mode turbines identified in the preconstruction analysis required by Noise Control Condition 2 are operating at or below the identified dBA reduction level.<br>[Final Order on ASC, Noise Control Condition 3] |

| | |
|---|---|
| OPR-NC-02 | During operation, the certificate holder shall maintain a complaint response system to address noise complaints. The certificate holder shall notify the department within two working days of receiving a noise complaint related to the facility. The notification should include, but is not limited to, the date the certificate holder received the complaint, the nature of the complaint, the complainant's contact information, the location of the affected property, and any actions taken, or planned to be taken, by the certificate holder to address the complaint.<br>[Final Order on ASC, Noise Control Condition 4] |
| OPR-NC-03 | During operation, in response to a complaint from the owner of a noise sensitive property regarding noise levels from the facility, the Council may require the certificate holder to monitor and record the statistical noise levels to verify that the certificate holder is operating in compliance with the noise control regulations. The monitoring plan must be reviewed and approved by the department prior to implementation. The cost of such monitoring, if required, shall be borne by the certificate holder.<br>[Final Order Noise Control Condition 5] |

### 4.7 Retirement Conditions (RET)

| Condition Number | Retirement (RET) Conditions |
|---|---|
| ***STANDARD: RETIREMENT AND FINANCIAL ASSURANCE (RT) [OAR 345-022-0050]*** | |
| RET-RF-01 | The certificate holder must retire the facility in accordance with a retirement plan approved by the Council if the certificate holder permanently ceases construction or operation of the facility. The retirement plan must describe the activities necessary to restore the site to a useful, nonhazardous condition, as described in OAR 345-027-0110(5). After Council approval of the plan, the certificate holder must obtain the necessary authorization from the appropriate regulatory agencies to proceed with restoration of the site.<br>[Final Order Retirement and Financial Assurance Condition 2]<br>[Mandatory Condition OAR 345-025-0006(9)] |
| RET-RF-02 | If the Council finds that the certificate holder has permanently ceased construction or operation of the facility without retiring the facility according to a final retirement plan approved by the Council, as described in OAR 345-027-0110, the Council must notify the certificate holder and request that the certificate holder submit a proposed final retirement plan to the department within a reasonable time not to exceed 90 days. If the certificate holder does not submit a proposed final retirement plan by the specified date, the Council may direct the department to prepare a proposed final retirement plan for the Council's approval.<br>Upon the Council's approval of the final retirement plan, the Council may draw on the bond or letter of credit described in section (8) to restore the site to a useful, nonhazardous condition according to the final retirement plan, in addition to any penalties the Council may impose under OAR Chapter 345, Division 29. If the amount of the bond or letter of credit is insufficient to pay the actual cost of retirement, the certificate holder must pay any additional cost necessary to restore the site to a useful, nonhazardous condition. After completion of site restoration, the Council must issue an order to terminate the site certificate if the Council finds that the facility has been retired according to the approved final retirement plan.<br>[Final Order Retirement and Financial Assurance Condition 3]<br>[Mandatory Condition OAR 345-025-0006(16)] |

## 5.0 Successors and Assigns

To transfer this site certificate or any portion thereof or to assign or dispose of it in any other manner, directly or indirectly, the certificate holder shall comply with OAR 345-027-0100.

## 6.0 Severability and Construction

If any provision of this agreement and certificate is declared by a court to be illegal or in conflict with any law, the validity of the remaining terms and conditions shall not be affected, and the rights and obligations of the parties shall be construed and enforced as if the agreement and certificate did not contain the particular provision held to be invalid.

## 7.0 Execution

This site certificate may be executed in counterparts and will become effective upon signature by the Chair of the Energy Facility Siting Council and the authorized representative of the certificate holder.

**IN WITNESS THEREOF**, this site certificate has been executed by the State of Oregon, acting by and through the Energy Facility Siting Council, and by Wheatridge Wind Energy, LLC.

**ENERGY FACILITY SITING COUNCIL**

By: _____

Hanley Jenkins, II, Chair

Oregon Energy Facility Siting Council

Date: _____

**WHEATRIDGE WIND ENERGY, LLC**

By: _____

Matthew Handel, Vice President Development, NextEra Energy Resources, LLC on behalf of Wheatridge Wind Energy, LLC

Date:_____

# Attachment A

## ~~Wind Facility and Solar Facility~~ WREFI Site Boundary Maps (Figure 1 and 1.1, RFA 5 Wheatridge Wind Energy Facility ~~ASC Exhibit C, Figure C-2 and RFA4~~)

**ENERGY FACILITY SITING COUNCIL**

**OF THE**

**STATE OF OREGON**

# ~~Fourth Amended~~ Site Certificate for the Wheatridge ~~Wind~~ Renewable Energy Facility II

**ISSUANCE DATES**

| | |
|---|---|
| **Site Certificate** | **TBD ~~April 28, 2017~~** |
| ~~First Amended Site Certificate~~ | ~~July 27, 2017~~ |
| ~~Second Amended Site Certificate~~ | ~~November 16, 2018~~ |
| ~~Third Amended Site Certificate~~ | ~~December 14, 2018~~ |
| ~~Fourth Amended Site Certificate~~ | ~~November 22, 2019~~ |

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**Attachments**

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| Attachment A | Facility Site Boundary Map |

**Acronyms and Abbreviations**

| | |
|---|---|
| ASC | Application for Site Certificate |
| Council | Oregon Energy Facility Siting Council |
| Department | Oregon Department of Energy |
| DOGAMI | Oregon Department of Geology and Mineral Industries |
| ESCP | Erosion and Sediment Control Plan |
| NPDES | National Pollutant Discharge Elimination System |
| O&M | Operations and Maintenance |
| OAR | Oregon Administrative Rule |
| ODFW | Oregon Department of Fish and Wildlife |
| ORS | Oregon Revised Statute |
| NRHP | National Register of Historic Places |
| WGS | Washington Ground Squirrel |

## 1.0 Introduction and Site Certification

This site certificate is a binding agreement between the State of Oregon (State), acting through the Energy Facility Siting Council (Council), and Wheatridge Wind II ~~Energy~~, LLC (certificate holder), which is a wholly-owned subsidiary of NextEra Energy Resources, LLC (NextEra or parent company). As authorized under Oregon Revised Statue (ORS) Chapter 469, the Council issues this site certificate authorizing certificate holder to construct, operate and retire the Wheatridge ~~Wind Energy~~ Renewable Energy Facility II (facility) at the below described site within Morrow and Umatilla counties, subject to the conditions set forth herein.

Both the State and certificate holder must abide by local ordinances, state law and the rules of the Council in effect on the date this site certificate is executed. However, upon a clear showing of a significant threat to public health, safety, or the environment that requires application of later-adopted laws or rules, the Council may require compliance with such later-adopted laws or rules (ORS 469.401(2)).

The findings of fact, reasoning and conclusions of law underlying the terms and conditions of this site certificate are set forth in the following documents, incorporated herein by this reference: (a) the *Final Order on the Application for Site Certificate for the Wheatridge Wind Energy Facility* issued on April 28, 2017 (hereafter, *Final Order on the Application*); (b) *Final Order on Request for Transfer* issued on July 27, 2017; *Final Order on Request for Amendment 3* issued on November 16, 2018; *Final Order on Request for Amendment 2* issued on December 14, 2018; and *Final Order on Request for Amendment 4* issued on November 22, 2019. In interpreting this site certificate, any ambiguity will be clarified by reference to the following, in order of priority: *(1) Final Order on Request for Amendment 5 (~~1~~2) Final Order on Request for Amendment 4 (~~2~~3) Final Order on Request for Amendment 2*; (~~3~~4) *Final Order on Request for Amendment 3*; (~~4~~5) *Final Order on Request for Amendment 1*; (~~5~~6) *Final Order on the Application*, and (6) the record of the proceedings that led to the above referenced orders. This site certificate binds the State and all counties, cities and political subdivisions in Oregon as to the approval of the site and the construction, operation, and retirement of the facility as to matters that are addressed in and governed by this site certificate (ORS 469.401(3)). This site certificate does not address, and is not binding with respect to, matters that are not included in and governed by this site certificate, and such matters include, but are not limited to: employee health and safety; building code compliance; wage and hour or other labor regulations; local government fees and charges; other design or operational issues that do not relate to siting the facility (ORS 469.401(4)); and permits issued under statutes and rules for which the decision on compliance has been delegated by the federal government to a state agency other than the Council (ORS 469.503(3)).

The definitions in ORS 469.300 and OAR 345-001-0010 apply to the terms used in this site certificate, except where otherwise stated, or where the context clearly indicates otherwise.

Each affected state agency, county, city, and political subdivision in Oregon with authority to issue a permit, license, or other approval addressed in or governed by this site certificate, shall upon submission of the proper application and payment of the proper fees, but without hearings or other proceedings, issue such permit, license or other approval subject only to conditions set forth in this site certificate. In addition, each state agency or local government agency that issues a permit, license or other approval for this facility shall continue to exercise enforcement

authority over such permit, license or other approval (ORS 469.401(3)). For those permits, licenses, or other approvals addressed in and governed by this site certificate, the certificate holder shall comply with applicable state and federal laws adopted in the future to the extent that such compliance is required under the respective state agency statutes and rules (ORS 469.401(2)).

The certificate holder must construct, operate and retire the facility in accordance with all applicable rules as provided for in Oregon Administrative Rule (OAR) Chapter 345, Division 26. After issuance of this site certificate, the Council shall have continuing authority over the site and may inspect, or direct the Oregon Department of Energy (Department) to inspect, or request another state agency or local government to inspect, the site at any time in order to ensure that the facility is being operated consistently with the terms and conditions of this site certificate (ORS 469.430).

The obligation of the certificate holder to report information to the Department or the Council under the conditions listed in this site certificate is subject to the provisions of ORS 192.502 *et seq.* and ORS 469.560. To the extent permitted by law, the Department and the Council will not publicly disclose information that may be exempt from public disclosure if the certificate holder has clearly labeled such information and stated the basis for the exemption at the time of submitting the information to the Department or the Council. If the Council or the Department receives a request for the disclosure of the information, the Council or the Department, as appropriate, will make a reasonable attempt to notify the certificate holder and will refer the matter to the Attorney General for a determination of whether the exemption is applicable, pursuant to ORS 192.450.

The Council recognizes that many specific tasks related to the design, construction, operation and retirement of the facility will be undertaken by the certificate holder's agents or contractors. Nevertheless, the certificate holder is responsible for ensuring compliance with all provisions of the site certificate.

The duration of this site certificate shall be the life of the facility, subject to termination pursuant to OAR 345-027-0010 or the rules in effect on the date that termination is sought, or revocation under ORS 469.440 and OAR 345-029-0100 or the statutes and rules in effect on the date that revocation is ordered. The Council shall not change the conditions of this site certificate except as provided for in OAR Chapter 345, Division 27.

## 2.0 Facility Location

The energy facility and its related ~~and~~ or supporting facilities are located within Morrow and Umatilla counties. The site boundary, as defined in OAR 345-001-0010, encompasses approximately ~~14,624~~ 11,742 acres of private land and includes the perimeter of the energy facility site, its related and supporting facilities, all temporary laydown and staging areas and all transmission corridors and micrositing corridors proposed by the certificate holder, as approved by the Council.[1]

The energy facility is divided into two groups, Wheatridge West and Wheatridge East. Wheatridge West is located entirely within Morrow County, bisected by Oregon Highway 207, approximately 5 miles northeast of Lexington and approximately 7 miles northwest of Heppner. Wheatridge East is located approximately 16 miles northeast of Heppner and includes land in both Morrow and Umatilla counties. Wheatridge West and Wheatridge East are connected via a 230 kV transmission line or "intraconnection" transmission line (see facility site boundary map provided in Attachment A).

### 2.1 Site Boundary

The site boundary encompasses a total of ~~14,624~~ 11,742 acres of privately owned land: 2,956 acres in Wheatridge East, 10,042 acres in Wheatridge West, and 1,626 acres in the intraconnection transmission line corridor. Table 1 identifies the Public Land Survey System sections in which the site boundary is located.

**Table 1. Location of Site Boundary by Township, Range and Section**

| Township | Range | Section(s) |
|---|---|---|
| **Wheatridge East** | | |
| 1N | 28E | 4, 5, 8, 9, 16, 17, 21 |
| 2N | 28E | 2, 3, 9, 10, 11, 14, 15, 16, 21, 22, 27, 28, 29, 32, 33 |
| **Wheatridge West** | | |
| 2N | 25E | 25, 26, 27, 34, 35, 36 |
| 1N | 25E | 1, 2, 11, 12, 13, 14, 15, 22, 23, 24 |
| 1N | 26E | 4, 6, 7, 8, 9, 15, 16, 17, 18, 19, 20, 21, 22, 28, 29, 30, 32, 33 |
| 1S | 25E | 1, 12 |
| 1S | 26E | 2, 3, 4, 5, 6, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 25, 26, 27, 28, 29, 34, 35, 36 |
| 2S | 26E | 1, 12 |
| **Intraconnection Corridor** | | |
| 1S | 27E | 7, 12, 13, 14, 15, 16, 17, 18, 21, 22, 23, 24 |
| 1S | 28E | 3, 4, 7, 8, 9, 16, 17, 18 |
| 1N | 28E | 28, 33 |

[1] Energy facility site, as defined in OAR 345-001-0010(54), means all land upon which an energy facility is located or proposed to be located.

For this facility, the certificate holder requested that the site boundary represent the "micrositing corridor" for the placement of facility components to allow some flexibility in specific component locations and design in response to site-specific conditions and engineering requirements to be determined prior to construction. The Council permits final siting flexibility within a micrositing corridor when the certificate holder demonstrates that requirements of all applicable standards have been satisfied by adequately evaluating the entire corridor and location of facility components anywhere within the corridor.

## 2.2 Micrositing Corridors

The certificate holder requested flexibility to locate components of the energy facility and its related and supporting facilities within a micrositing corridor to allow adjustment of the specific location of components, while establishing outer boundaries of potential construction for purposes of evaluating potential impacts.

The site boundary contains two separate micrositing corridors, one for wind facility components and one for solar facility components. Micrositing corridors for wind turbines are a minimum of approximately 660 feet in width around turbines, and wider in some locations. The site boundary width around site access roads and electrical collection lines (collector lines) is narrower, between 200 feet and 500 feet in width. The micrositing corridor is wider for the area surrounding the substations, meteorological towers (met towers), the operation and maintenance (O&M) buildings, and construction yards.

Micrositing corridors for solar facility components, as presented in Figure 1 *Solar Micrositing Corridors* of this amended site certificate, include the area for Solar Array 1 and Solar Array 2, which includes includes private access roads, service roads, a 34.5 kV collection system, gates and perimeter security fence.

## 2.3 Intraconnection Transmission Line Corridor for the Wind Facility

The certificate holder obtained approval of four routing options associated with the wind facility for the 230 kV intraconnection transmission line that interconnects Wheatridge West and Wheatridge East for the transmission of generated power. The intraconnection transmission line corridor is approximately 1,000-feet in width and ranges in length from 24.5 to 31.5 miles, based upon the four approved transmission line route options.

The four approved transmission line route options range in length from 24.5 to 31.5 miles and would follow the same alignment for approximately 18 miles from the Wheatridge East substation to the crossing at Sand Hollow Road. For the remainder of the route, Options 1 and 3 traverse the same alignment, with Option 1 extending 7 miles longer than Option 3; Option 2 and 4 traverse the same alignment, with Option 2 extending 3.5 miles longer than Option 4. Option 1 and 2 differ for an approximately 4 mile segment located between Sand Hollow Road and the Wheatridge West substation (primary), with Option 2 traversing from Sand Hollow Road through the alternative (2b) Wheatridge West substation to the primary (1) Wheatridge West substation. The four approved routing options and associated transmission line corridors are presented in Attachment A of the site certificate (and are clearly delineated in figures provided in ASC Exhibit C).

## 3.0 Facility Description

The facility includes wind and solar energy generation components, each with related or supporting facilities. The energy generation capacity of the facility, with wind and solar components, at full build out by the specified construction completion deadlines is ~~650~~ 550 MW. Wind energy facility components are further described in Section 3.1 and 3.1.1 of this site certificate; solar energy facility components are further described in Section 3.2 and 3.2.1 of this site certificate.

### 3.1 Wind Energy Facility Components

The construction commencement deadline for the wind energy facility and its related or supporting facilities must begin by May 24, 2020 (under General Standard Condition 1 (GEN-GS-01) and construction of these components must be completed on or before May 24, 2023 (under General Standard Condition 2 (GEN-GS-02).

Wind energy generation components include up to ~~292~~ 252 wind turbines with a total generating capacity up to ~~500~~ 400 MW. Wind turbines each consist of a nacelle, a three-bladed rotor, turbine tower and foundation. The nacelle houses the equipment such as the gearbox, generator, brakes, and control systems for the turbine. The total height of the turbine tower and blades (tip-height) ranges between 431 and ~~476~~99.7 feet, depending on the turbine model selected.

The base of each wind turbine tower foundation requires a cleared area (typically a gravel pad) up to 80 feet in diameter. The turbines are grouped in linear "strings" within the micrositing corridor and interconnect with a 34.5 kV electrical collection system (described below). Most wind turbine types include a generator step-up (GSU) transformer installed at the base of the tower that would be used to increase the voltage of the turbine to that of the electrical collection system. Table 2 shows the range of turbine specifications approved for use at the facility site.

**Table 2: Approved Wind Turbine Dimensions**

| Specification | Maximum (ft) |
|---|---|
| Blade Length | 204.1 |
| Hub Height | 291.3 |
| Rotor Diameter | 416.7 |
| Total Height (tower height plus blade length) | 499.7 |
| Aboveground Blade-Tip Clearance | 70.5 |
| Wind turbine types with the maximum dimension specifications shall be equipped with Low Noise Trailing Edge blades. | |

### 3.1.1 Related or Supporting Facilities to Wind Energy Facility Components

Related or supporting facilities to the wind energy facility components as described below must commence construction by May 24, 2020:

- Electrical collection system (includes up to ~~88~~ 68 miles of mostly underground 34.5 kV collector lines)
- Up to three collector substations
- Up to 32 miles of up to two overhead, parallel 230 kV transmission lines
- Up to ~~12~~ 10 permanent meteorological (met) towers
- Communication and Supervisory Control and Data Acquisition (SCADA) System
- Up to two operations and maintenance (O&M) buildings
- Up to ~~73~~ 61 miles of new or improved access roads
- Additional temporary construction areas (including staging areas and one or more temporary concrete batch plant areas)
- Battery Storage Systems (20 and 30 MW, each located on up to 5 acres) and Interconnection Facilities

Construction of these related or supporting facilities must be complete by May 24, 2023.

*Electrical Collection System*

The electrical collection system includes up to ~~88~~ 68 miles of mostly underground 34.5 kV collector lines. Electrical connections are located underground or in enclosed junction boxes between the turbine and the pad-mounted GSU transformer. From the GSU transformer to the collector lines the connections are installed along and between the turbine strings to collect power generated by each wind turbine and to route the power to one of three collector substations, which step up the power from 34.5 kV to 230 kV.

The collector lines are underground, to the extent practicable, in trenches approximately three-feet wide and not less than two- to three-feet deep, generally alongside access roads, to minimize ground disturbance. Where land use and soil conditions make a buried depth of three-feet infeasible, collector lines may be buried at a depth of less than three feet, while still adhering to National Electrical Safety Code (NESC) standards.

Collector lines may be run overhead in situations where a buried cable would be infeasible or would create unnecessary impacts, such as at stream or canyon crossings. Overhead collector lines are supported by a wooden or steel pole structure. Each support pole has been buried approximately 6 feet in the ground and extends to a height of approximately 60 feet above ground, spaced 100 to 200 feet apart. Overhead collector lines are only anticipated in Wheatridge West. The facility includes up to 10.8 miles of overhead collector lines; however, the specific locations of overhead collector lines will not be known until site geotechnical work has been completed during pre-construction activities.

No more than ~~88~~ 68 miles of collector lines would be needed for wind facility components.

*Collector Substations*

The facility includes up to two substations within Wheatridge West and one substation within Wheatridge East. The proposed substation locations are presented in ASC Exhibit C. However, Wheatridge has requested, and Council grants, the ability to microsite the final location and number (up to three) of substations within the micrositing corridor.

Prior to construction, substation sites will be cleared and graded, with a bed of crushed rock applied for a durable surface. Each collector substation is located on a two- to ten-acre site, enclosed by a locked eight-foot tall wire mesh fence. Each substation consists of transformers, transmission line termination structures, a bus bar, circuit breakers and fuses, control systems, meters, and other equipment.

*230 kV Intraconnection Transmission Line*

The facility includes one or two parallel overhead 230 kV intraconnection transmission lines supported by H-frame or monopole structures constructed of either wood or steel that extends 24.5 to 31.5 miles in length, depending on the route option selected. The 230 kV overhead transmission line structures are approximately 60 to 150 feet tall and spaced approximately 400 to 800 feet apart depending on the terrain. Each transmission line route requires acquisition of an approximately 150-foot wide right-of-way from private landowners.

The four approved transmission line routing options and associated corridors for the intraconnection transmission line are described below (see Attachment A figure and figures contained in ASC Exhibit C):

- Option 1: Two Project Substations to Longhorn
    - This option runs from Substation 3 in Wheatridge East to Substation 1 in Wheatridge West and then to the proposed UEC/CB Strawberry substation, just to the west of Wheatridge West, for interconnection to a UEC or UEC/CB operated Gen-tie Line to the proposed BPA Longhorn substation. The intraconnection line route is 31.5 miles (50.5 kilometers) in length.
- Option 2: Three Project Substations to Longhorn (Final facility design with battery storage system would not include this routing option)
    - This option runs from Substation 3 in Wheatridge East to Substation 2b in Wheatridge West, then on to Substation 2a in Wheatridge West, and then to the proposed UEC/CB Strawberry substation, just west of Wheatridge West, for interconnection to a UEC or UEC/CB operated Gen-tie Line to the proposed BPA Longhorn substation. The intraconnection line route is 31.3 miles (50.3 kilometers) in length.
- Option 3: Two Project Substations to Stanfield
    - This option runs from Substation 1 in Wheatridge West to Substation 3 in Wheatridge East for interconnection to a UEC operated Gen-tie Line to the proposed BPA Stanfield substation. The intraconnection line route is 24.5 miles (39.4 kilometers) in length.
- Option 4: Three Project Substations to Stanfield (Final facility design with battery storage system would not include this routing option)

- This option runs from Substation 2a in Wheatridge West to Substation 2b in Wheatridge West, and then to Substation 3 in Wheatridge East for interconnection to a UEC operated Gen-tie Line to the proposed BPA Stanfield substation. The intraconnection line route is 27.8 miles (44.7 kilometers) in length.

*Meteorological Towers*

The facility includes up to ~~12~~10 permanent met towers. Up to five met towers are sited in Wheatridge East and up to seven met towers are sited in Wheatridge West for the collection of wind speed and direction data. Each met tower has a free-standing, non-guyed design and is approximately 328 feet (100 meters) in height. Installation of permanent met towers results in approximately 98-feet (30-meters) in diameter of temporary land disturbance per tower and approximately 32-feet (10-meter) in diameter of permanent land disturbance per tower. Permanent met towers are fitted with safety lighting and paint as required by the Federal Aviation Administration (FAA).

*Communication and SCADA System*

The facility includes a communication system, consisting of fiber optic and copper communication lines that connect the turbines, met towers, and substations to the O&M buildings. A SCADA system is installed in the O&M buildings to enable remote operation to collect operating data for each wind turbine, and to archive wind and performance data. SCADA system wires are collocated with the collector lines both in the underground trenches and overhead, if necessary.

*O&M Buildings*

The facility includes up to two O&M buildings, each located on up to 1.1 acres, one within Wheatridge East and one within Wheatridge West. Each O&M building consists of a single-story, prefabricated structure approximately 6,000 to 9,000 square feet in size, and includes an office, break room, kitchen, lavatory with shower, utility room, covered vehicle parking, storage for maintenance supplies and equipment, and SCADA system. A permanent, fenced, graveled parking and storage area for employees, visitors, and equipment is located adjacent to each O&M building. Each building is served by an on-site well and septic system and power supplied by a local service provider using overhead and/or underground lines.

*Access Roads*

Primary access to the facility site is from Interstate 84 (I-84) via Bombing Range Road or Oregon Route 207 (OR-207). The certificate holder completed improvements to existing public roads to accommodate construction activities, including flattening crests or filling dips, widening sharp corners, or adding road base material; the certificate holder is required to consult with the appropriate county road master on specific improvements prior to construction. The certificate holder committed to completing upgrade to existing roads according to applicable state and county road standards and after consultation with Morrow and Umatilla County staff. The certificate holder is required to implement a road use agreement with each county to specify requirements, including that all existing public roads used to access the site would be left in as good or better condition than that which existed prior to the start of construction.

Access to the turbines, construction yards, substations, and O&M buildings is from a network of private access roads constructed or improved by the certificate holder. The certificate holder will grade and gravel all newly constructed and improved site access roads to meet load requirements for heavy construction equipment, as necessary. Following turbine construction, the certificate holder will narrow the site access roads for use during operations and maintenance. The additional disturbed width required during construction will be restored following the completion of construction by removing gravel surfacing, restoring appropriate contours with erosion and stormwater control best management practices (BMPs), decompacting as needed, and revegetating the area appropriately.

In the maximum impact scenario, wind energy facility components will require up to 73 miles of access roads.

Temporary access roads were needed for the construction of the intraconnection transmission line(s). The intraconnection transmission line(s) can be constructed and maintained using only large trucks rather than heavy construction cranes, and construction will occur during the dry time of year when the ground surface is hard enough to support those vehicles. Therefore, the interconnection transmission lines do not include permanent access roads. The total mileage of the temporary access roads needed for constructing the intraconnection transmission line(s) depends on the intraconnection line route option chosen. The shortest route would require approximately 22.8 miles of access roads, while the longest would require approximately 25.5 miles.

*Additional Construction Yards*

The facility includes up to four temporary construction yards located within the site boundary to facilitate the delivery and assembly of material and equipment. The construction yards are used for temporary storage of diesel and gasoline fuels, which are located in an above-ground 1,000-gallon diesel and 500-gallon gasoline tank, within designated secondary containments areas.

Each construction yard occupies between 15 and 20 acres, and was graded and gravel surfaced. The certificate holder is required to restore all construction yards to pre-construction conditions unless an agreement with the landowner leads to some or all of the construction yard being retained after construction.

In addition, the certificate holder may utilize one or more temporary concrete batch plant areas, located within the construction yard area. The temporary concrete batch plants are permitted and operated by the selected contractor.

*Battery Storage Systems and Interconnection Facilities (DC Coupled)*

The battery storage systems associated with wind energy facility components include the following:

- Series of modular containers or a building per system (approximately 80 feet long, 100 feet wide and 15-20 feet tall for the 20 MW system); approximately 190 feet long, 100 feet wide and 15-20 feet tall for the 30 MW system)
    - Each system would contain lithium-ion batteries within battery modules placed in anchored racks within containers or building.

    - Approximately eighteen 2.7 mega-voltampere (MVA) inverters with associated step up transformers with a combined footprint approximately 8 feet by 4 feet.
    - Each system would be equipped with a gas pressured deluge fire suppression system, independent smoke detection system, and external fire water tank
    - Each system would include a cooling system comprised of a bank of four power conditioning system fan units with motor
- Control house, approximately 16 feet by 11 feet, with an external heating, ventilation and air conditioning unit (HVAC)
- Protective device; skid-mounted power transformer; and bi-directional inverter

Battery and inverter equipment would be electrically connected via a combination of aboveground cable trays, underground conduit, and covered cable trenches. Site surfacing would remain primarily gravel. The battery storage systems would interconnect with facility substations via feeder lines.

## 3.2 Solar Energy Facility Components

The construction commencement deadline for the solar energy facility and its related or supporting facilities must begin by DATE TBD [three years following effective site certificate date] (under General Standard Condition 1 (GEN-GS-01) and construction of these components must be completed on or before DATE TBD [three years from date of construction commencement] (under General Standard Condition 2 (GEN-GS-02).

Solar energy facility components include up to two solar arrays located within Wheatridge West, entirely within Morrow County, on Exclusive Farm Use zoned land. The solar arrays consist of photovoltaic panels mounted onto tracking modules and arranged in strings within the solar micrositing corridors. Strings of modules are connected by electrical collector lines and inverters that convert the direct current power generated by panels to alternating current power. Transformers placed near the inverters step up power to 34.5 kV for transmission to the Wheatridge West substation. The maximum layout including total number of modules, configuration, dimensions, total energy generating capacity and mounting system of solar array components shall be substantially as described in Request for Amendment 4.

*Photovoltaic Modules and Racking*

Each solar module is approximately 6 feet by 3 feet, placed on a nonspecular, galvanized steel rack. Each set of approximately 70 racked modules is mounted approximately 5 feet off the ground on a single-axis tracker that would rotate 60 degrees to the east and west. Each tracker is supported by steel posts; post depth varies depending on soil conditions, but the posts are typically placed 8 feet below the surface. The maximum of height of the modules at full tilt would be approximately 16 feet.

*Combiner Boxes, Inverters and Transformers*

The current produced by solar modules is in the form of direct current (DC). Within each module block, several DC electrical conduits (cables on the back of the modules) aggregate electricity produced from each of the modules into a combiner box. Approximately 18 combiner boxes are located throughout each module block for a total of approximately 740 combiner boxes. The photovoltaic modules are arranged into blocks, with each block connecting via collector lines to

approximately 41 modular inverter enclosures. Inverters convert DC current into alternating current (AC) power to then be transmitted to the grid. The inverter AC output voltage (480 volts) is stepped up to a higher voltage (34.5 kilovolts [kV]) by approximately 41 pad-mounted transformers designed to integrate with the inverter.

### 3.2.1 Related or Supporting Facility to Solar Energy Facility Components

Related or supporting facilities associated with the solar facility must begin construction by the dates described in General Standard Condition 1 (GEN-GS-01) and construction must be completed, substantially as described below, by the deadline stabled in General Standard Condition 2 (GEN-GS-02).

*Electrical Collection System*

Electricity generated from the solar energy facility components are aggregated via underground 34.5 kV cables to an above- or belowground 34.5 kV collector line that interconnect to Wheatridge West collector substation. Underground AC electrical cables are buried to a minimum of 3 feet. Overhead collector lines are supported by a wooden or steel monopole structure, with foundations extending 6 feet in depth and structure height of approximately 60 feet above ground. The collection system also includes two 34.5 kV collector line routes outside of the perimeter fenceline; one route extends approximately 2.32 miles from Solar Array 1 to Wheatridge West collector substation. The second collector line interconnects Solar Array 1 to Solar Array 2 and extends approximately 0.66 miles along Bombing Range Road.

*Service Roads, Gates, and Fencing*

Service roads, approximately 16-feet wide, located within and around the perimeter of the proposed solar arrays, and within the solar micrositing corridors, to facilitate access for construction and maintenance purposes. Vegetation is cleared and maintained along perimeter roads to provide a vegetation clearance area extending 100-feet wide for fire safety. Internal roads are all-weather, compacted gravel and approximately 20 feet wide, with an internal turning radius of 28 feet. Vegetation maintenance along solar array interior roads includes mowing to a height no more than 3 inches.

The perimeter service road is bordered by a 7 or 8-foot-high chain-link security fence. There is also a locked security entrance gates to allow vehicle and pedestrian access.

*Wheatridge West Collector Substation Expansion*

Wheatridge West collector substation (by Strawberry Lane) includes 10 acres, 5 of which accommodate electrical equipment such as an additional transformer, switches, protective relay and metering equipment needed to handle the power generated by the solar energy facility components.

*Battery Storage System Sites – Distributed Locations (AC Coupled)*

Solar energy facility components include approximately 41 distributed sites of sites of of lithium-ion batteries housed within concrete containers or similar containment throughout and within the solar

array fencelines. Each container measures up to 12 feet wide, 36 feet long and 10 feet tall. Lithium-ion battery storage systems are modular systems. Each module contains multiple smaller battery cells, each measuring up to 3.2 by 7 centimeters. Modules are contained in anchored racks within the concrete containers; typically, each rack houses 12 battery modules along with a switchgear assembly. Cooling equipment is located either on top of the concrete containers or along the side.

## 4.0 Site Certificate Conditions

### 4.1 Condition Format

The conditions in Sections 4.2 through 4.7 of this Site Certificate are organized and coded to indicate the phase of implementation, the standard the condition is required to satisfy, and an identification number (1, 2, 3, etc.)[2]. The table below presents a "key" for phase of implementation:

| Key | Type of Conditions/Phase of Implementation |
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| GEN | General Conditions: Design, Construction and Operation |
| PRE | Pre-Construction Conditions |
| CON | Construction Conditions |
| PRO | Pre-Operational Conditions |
| OPR | Operational Conditions |
| RET | Retirement Conditions |

The standards are presented using an acronym; for example, the General Standard of Review is represented in the condition numbering as "GS"; the Soil Protection standard is represented in the condition numbering as "SP" and so forth.

For example, the coding of Condition GEN-GS-01 represents that the condition is a general condition (GEN) to be implemented during design, construction and operation of the facility, is required to satisfy the Council's General Standard of Review, and is condition number 1.

[2] The identification number is not representative of an order that conditions must be implemented; it is intended only to represent a numerical value for identifying the condition.

## 4.2 General Conditions (GEN): Design, Construction and Operations

| Condition Number | General (GEN) Conditions |
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| ***STANDARD: GENERAL STANDARD OF REVIEW (GS) [OAR 345-022-0000]*** | |
| GEN-GS-01 | The certificate holder shall:<br>a. Begin construction of wind facility components and its related or supporting facilities, by May 24, 2020. On or before May 24, 2020, the certificate holder shall provide written notification to the Department that it has met the construction commencement deadline. Construction is defined in OAR 345-001-0010.<br>b. Begin construction of solar facility components and its related or supporting facilities, as approved the Fourth Amended Site Certificate, by November 22, 2022). On or before November 22, 2022, the certificate holder shall provide written notification to the Department that it has met the construction commencement deadline. Construction is defined in OAR 345-001-0010.<br>[Final Order on ASC, General Standard Condition 1; AMD2; AMD4]<br>[Mandatory Condition OAR 345-025-0006(4)] |
| GEN-GS-02 | The certificate holder shall:<br>a. Complete construction of the wind facility components and its related or supporting facilities by May 24, 2023. The certificate holder shall promptly notify the Department of the date of completion of construction.<br>b. Complete construction of solar facility components and its related or supporting facilities, as approved the Fourth Amended Site Certificate, by November 22, 2025. On or before November 22, 2025, the certificate holder shall promptly notify the Department of the date of completion of construction.<br>[Final Order on ASC, General Standard Condition 2; AMD2; AMD4]<br>[Mandatory Condition OAR 345-025-0006(4)] |
| GEN-GS-03 | The certificate holder shall design, construct, operate, and retire the facility:<br>a. Substantially as described in the site certificate;<br>b. In compliance with the requirements of ORS Chapter 469, applicable Council rules, and applicable state and local laws, rules and ordinances in effect at the time the site certificate is issued; and<br>c. In compliance with all applicable permit requirements of other state agencies.<br>[Final Order on ASC, Mandatory Condition 2] [OAR 345-025-0006(3)] |
| GEN-GS-04 | Except as necessary for the initial survey or as otherwise allowed for wind energy facilities, transmission lines or pipelines under this section, the certificate holder shall not begin construction, as defined in OAR 345-001-0010, or create a clearing on any part of the site until the certificate holder has construction rights on all parts of the site. For the purpose of this rule, "construction rights" means the legal right to engage in construction activities. For wind energy facilities, transmission lines or pipelines, if the certificate holder does not have construction rights on all parts of the site, the certificate holder may nevertheless begin construction, as defined in OAR 345-001-0010, or create a clearing on a part of the site if the certificate holder has construction rights on that part of the site and: |

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| | a. The certificate holder would construct and operate part of the facility on that part of the site even if a change in the planned route of a transmission line or pipeline occurs during the certificate holder's negotiations to acquire construction rights on another part of the site; or<br>b. The certificate holder would construct and operate part of a wind energy facility on that part of the site even if other parts of the facility were modified by amendment of the site certificate or were not built.<br>[Final Order on ASC, Mandatory Condition 3] [OAR 345-025-0006 (5)] |
| GEN-GS-05 | If the certificate holder becomes aware of a significant environmental change or impact attributable to the facility, the certificate holder shall, as soon as possible, submit a written report to the department describing the impact on the facility and any affected site certificate conditions.<br>[Final Order on ASC, Mandatory Condition 6] [OAR 345-025-0000(6)] |
| GEN-GS-06 | The Council shall include as conditions in the site certificate all representations in the site certificate application and supporting record the Council deems to be binding commitments made by the applicant.<br>[Final Order on ASC, Mandatory Condition 5] [OAR 345-025-0006(10)] |

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| GEN-GS-07 | Upon completion of construction, the certificate holder shall restore vegetation to the extent practicable and shall landscape all areas disturbed by construction in a manner compatible with the surroundings and proposed use. Upon completion of construction, the certificate holder shall remove all temporary structures not required for facility operation and dispose of all timber, brush, refuse and flammable or combustible material resulting from clearing of land and construction of the facility.<br>[Final Order on ASC, Mandatory Condition 6] [OAR 345--025-0006(11)] |
| GEN-GS-08 | The certificate holder shall design, engineer and construct the facility to avoid dangers to human safety presented by seismic hazards affecting the site that are expected to result from all maximum probable seismic events. As used in this rule "seismic hazard" includes ground shaking, ground failure, landslide, liquefaction triggering and consequences (including flow failure, settlement buoyancy, and lateral spreading), cyclic softening of clays and silts, fault rupture, directivity effects and soil-structure interaction. For coastal sites, this also includes tsunami hazards and seismically-induced coastal subsidence.<br>[Final Order on ASC, Mandatory Condition 7] [OAR 345-025-0006(12)] |
| GEN-GS-09 | The certificate holder shall notify the Department, the State Building Codes Division and the Department of Geology and Mineral Industries promptly if site investigations or trenching reveal that conditions in the foundation rocks differ significantly from those described in the application for a site certificate. After the Department receives the notice, the Council may require the certificate holder to consult with the Department of Geology and Mineral Industries and the Building Codes Division and to propose mitigation actions.<br>[Final Order on ASC, Mandatory Condition 8] [OAR 345-025-0006 (13)] |
| GEN-GS-10 | The certificate holder shall notify the department, the State Building Codes Division and the Department of Geology and Mineral Industries promptly if shear zones, artesian aquifers, deformations or clastic dikes are found at or in the vicinity of the site. After the Department receives notice, the Council may require the certificate holder to consult with the Department of Geology and Mineral Industries and the Building Codes Division to propose and implement corrective or mitigation actions.<br>[Final Order on ASC, Mandatory Condition 9] [OAR 345-025-0006 (14)] |
| GEN-GS-11 | Before any transfer of ownership of the facility or ownership of the site certificate holder, the certificate holder shall inform the department of the proposed new owners. The requirements of OAR 345-027-0100 apply to any transfer of ownership that requires a transfer of the site certificate.<br>[Final Order on ASC, Mandatory Condition 10] [OAR 345--025-0006 (15)] |
| GEN-GS-12 | The Council shall specify an approved corridor in the site certificate and shall allow the certificate holder to construct the pipeline or transmission line anywhere within the corridor, subject to the conditions of the site certificate. If the applicant has analyzed more than one corridor in its application for a site certificate, the Council may, subject to the Council's standards, approve more than one corridor.<br>The transmission line corridors approved by EFSC pursuant to this condition is described in Section 2.3 of the site certificate, and presented in the facility site map (see Attachment A of the site certificate.<br>[Final Order on ASC, Site Specific Condition 1] [OAR 345-025-0010(5)]] |
| ***STANDARD: ORGANIZATIONAL EXPERTISE (OE) [OAR 345-022-0010]*** | |
| GEN-OE-01 | Any matter of non-compliance under the site certificate is the responsibility of the certificate holder. Any notice of violation issued under the site certificate will be issued to the certificate holder. Any civil penalties under the site certificate will be levied on the certificate holder. |

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| | [Final Order on ASC, Organizational Expertise Condition 5] |
| GEN-OE-02 | In addition to the requirements of OAR 345-026-0170, within 72 hours after discovery of incidents or circumstances that violate the terms or conditions of the site certificate, the certificate holder must report the conditions or circumstances to the department.<br>[Final Order on ASC, Organizational Expertise Condition 6] |
| GEN-OE-03 | During facility construction and operation, the certificate holder shall report to the Department, within 7 days, any change in the corporate structure of the parent company, NextEra Energy Resources, LLC. The certificate holder shall report promptly to the Department any change in its access to the resources, expertise, and personnel of NextEra Energy Resources, LLC.<br>[Amendment #1 , Organizational Expertise Condition 9] |
| GEN-OE-04 | The certificate holder shall:<br>a. Prior to and during construction, as applicable, provide evidence to the Department that a contractual agreement has been obtained for transport and disposal of battery and battery waste by a licensed hauler and requires the third-party to comply with all applicable laws and regulations, including applicable provisions of 49 CFR 173.185.<br>b. Prior to transporting and disposing of battery and battery waste during facility operations, provide evidence to the Department that a contractual agreement has been obtained for transport and disposal of battery and battery waste by a licensed hauler and requires the third-party to comply with all applicable laws and regulations, including applicable provisions of 49 CFR 173.185.<br>[Final Order on AMD2, Organizational Expertise Condition 10] |
| ***STANDARD: STRUCTURAL (SS) [OAR 345-022-0020]*** | |
| GEN-SS-01 | The certificate holder shall design, engineer, and construct the facility in accordance with the current versions of the latest International Building Code, Oregon Structural Specialty Code, and building codes as adopted by the State of Oregon at the time of construction.<br>[Final Order on ASC, Structural Standard Condition 2] |

| ***STANDARD: LAND USE (LU) [OAR 345-022-0030]*** | |
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| GEN-LU-01 | The certificate holder shall design the facility to comply with the following setback distances in Morrow County:<br>a. Wind turbines shall be setback from the property line of any abutting property of any non-participant property owners a minimum of 110 percent of maximum blade tip height of the wind turbine tower.<br>b. Wind turbines shall be setback 100 feet from all property boundaries, including participant property boundaries within the site boundary, if practicable.<br>c. Wind turbine foundations shall not be located on any property boundary, including participant property boundaries within the site boundary.<br>d. Wind turbines shall be setback 110% of the overall tower-to-blade tip height from the boundary right-of-way of county roads, state and interstate highways.<br>e. <u>Perimeter fenceline of solar facility components shall be setback: 20 feet from property fronting on a local minor collector road rights of way; 30 feet from property fronting on a major collector road right of way; and 80 feet from an arterial road right of way, unless other provisions for combining access are provided and approved by the county.</u><br>f. <u>East and west sides of perimeter fenceline of solar facility components shall be setback 20 feet from adjacent land uses except that on corner lots or parcels the side yard on the street side shall be a minimum of 30 feet.</u><br>g. <u>North side of perimeter fenceline of solar facility components shall be setback a minimum of 25 feet.</u><br>[Final Order on ASC; AMD3 Land Use Condition 1; AMD4] |
| GEN-LU-02 | During design and construction of the facility, the certificate holder shall:<br>a. Obtain an access permit for changes in access on Morrow County roads; and<br>b. Improve or develop private access roads impacting intersections with Morrow County roads in compliance with Morrow County access standards.<br>[Final Order on ASC, Land Use Condition 4] |
| GEN-LU-03 | During design and construction, the certificate holder shall implement the following actions on all meteorological towers approved through the site certificate:<br>a. Paint the towers in alternating bands of white and red or aviation orange; or<br>b. Install aviation lighting as recommended by the Federal Aviation Administration.<br>[Final Order on ASC, Land Use Condition 9] |
| GEN-LU-04 | The certificate holder shall design and construct the facility using the minimum land area necessary for safe construction and operation. The certificate holder shall:<br>a. Locate access roads and temporary construction laydown and staging areas to minimize disturbance of farming practices;<br>b. Place turbines and transmission intraconnection lines along the margins of cultivated areas to reduce the potential for conflict with farm operations, where feasible.<br>c. Site solar array collector lines, if aboveground, within or adjacent to an existing road, railroad or transmission line right-of-way; parallel to an existing transmission corridor; or co-located with existing transmission line or each other, unless not technically feasible due to lack of availability, geographic constraints, engineering limitations, or other reasons as agreed upon by the Department consistent with this condition.<br>d. Bury underground communication and electrical lines within the area disturbed by temporary road widening, where possible. |

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| | [Final Order on ASC, Land Use Condition 11; AMD4] |
| GEN-LU-05 | During design and construction of the facility, the certificate holder shall ensure that fencing and landscaping selected and used for the O&M building and similar facility components sited within Morrow County blend with the nature of the surrounding area.<br>[Final Order on ASC, Land Use Condition 14] |
| GEN-LU-06 | During micrositing of the facility, the certificate holder shall ensure that wind turbines are sited based on a minimum setback of:<br>a. 110% of the overall tower-to-blade tip height from the boundary right-of-way of county roads and state and interstate highways in Umatilla and Morrow counties.<br>b. 2 miles from turbine towers to a city urban growth boundary.<br>c. 1 mile from turbine towers to land within Umatilla County lands zoned Unincorporated Community.<br>d. 2 miles from turbine towers to rural residences within Umatilla County.<br>e. 164 feet (50 meters) from tower and facility components to known archeological, historical and cultural sites or CTUIR cultural site.<br>[Final Order on ASC;AMD3 Land Use Condition 16;] |
| GEN-LU-07 | During design and construction, the certificate holder must ensure that the O&M building in Umatilla County is consistent with the character of similar agricultural buildings used by commercial farmers or ranchers in Umatilla County.<br>[Final Order on ASC, Land Use Condition 20] |

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| GEN-LU-08 | During facility design and construction of new access roads and road improvements, the certificate holder shall implement best management practices after consultation with the Umatilla County Soil Water Conservation district. The new and improved road designs must be reviewed and certified by a civil engineer.<br>[Final Order on ASC, Land Use Condition 22] |
| GEN-LU-09 | Before beginning electrical production, the certificate hold shall provide the location of each turbine tower, electrical collecting lines, the O&M building, the substation, project access roads, and portion of the intraconnection transmission line located in Umatilla County to the department and Umatilla County in a format suitable for GPS mapping.<br>[Final Order on ASC, Land Use Condition 24] |
| GEN-LU-10 | During construction and operation of the facility, the certificate holder shall deliver a copy of the annual report required under OAR 345-026-0080 to the Umatilla County Planning Commission on an annual basis.<br>[Final Order on ASC, Land Use Condition 28] |
| ***STANDARD: RETIREMENT AND FINANCIAL ASSURANCE (RT) [OAR 345-022-0050]*** | |
| GEN-RF-01 | The certificate holder shall prevent the development of any conditions on the site that would preclude restoration of the site to a useful, non-hazardous condition to the extent that prevention of such site conditions is within the control of the certificate holder.<br>[Final Order on ASC, Retirement and Financial Assurance Condition 1]<br>[Mandatory Condition OAR 345-025-0006(7)] |
| ***STANDARD: FISH AND WILDLIFE HABITAT (FW) [OAR 345-022-0060]*** | |
| GEN-FW-01 | During construction and operation, the certificate holder shall impose a 20 mile per hour speed limit on new and improved private access roads, which have been approved as a related and supporting facility to the energy facility.<br>[Final Order on ASC, Fish and Wildlife Habitat Condition 2] |
| GEN-FW-02 | The certificate holder shall construct all overhead collector and transmission intraconnection lines in accordance with the latest Avian Power Line Interaction Committee design standards, and shall only install permanent meteorological towers that are unguyed.<br>[Final Order on ASC, Fish and Wildlife Habitat Condition 6] |
| ***STANDARD: SCENIC RESOURCES (SR) [OAR 345-022-0080]*** | |
| GEN-SR-01 | To reduce visual impacts associated with lighting facility structures, other than lighting on structures subject to the requirements of the Federal Aviation Administration or the Oregon Department of Aviation, the certificate holder shall implement the following measures:<br>a. Outdoor night lighting at the collector substations, Operations and Maintenance Buildings, and battery storage systems, must be<br>i. The minimum number and intensity required for safety and security;<br>ii. Directed downward and inward within the facility to minimize backscatter and offsite light trespass; and<br>iii. Have motion sensors and switches to keep lights turned off when not needed.<br>[Final Order on ASC, Scenic Resources Condition 1, AMD2] |

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| GEN-SR-02 | The certificate holder shall:<br>a. Design and construct the O&M buildings and battery storage systems to be generally consistent with the character of agricultural buildings used by farmers or ranchers in the area, and the buildings shall be finished in a neutral color to blend with the surrounding landscape;<br>b. Paint or otherwise finish turbine structures in a grey, white, or off-white, low reflectivity coating to minimize reflection and contrast with the sky, unless required otherwise by the local code applicable to the structure location.<br>c. Design and construct support towers for the intraconnection transmission lines using either wood or steel structures and utilize finish with a low reflectivity coating;<br>d. Finish substation structures and battery storage systems utilizing neutral colors to blend with the surrounding landscape;<br>e. Minimize use of lighting and design lighting to prevent offsite glare;<br>f. Not display advertising or commercial signage on any part of the proposed facility;<br>g. Limit vegetation clearing and ground disturbance to the minimum area necessary to safely and efficiently install the facility equipment;<br>h. Water access roads and other areas of ground disturbance during construction, as needed, to avoid the generation of airborne dust; and<br>i. Restore and revegetate temporary impact areas as soon as practicable following completion of construction.<br>[Final Order on ASC, Scenic Resources Condition 2, AMD2] |
| ***STANDARD: PUBLIC SERVICES (PS) [OAR 345-022-0110]*** | |
| GEN-PS-01 | During construction and operation, the certificate holder shall coordinate with its solid waste handler to provide the information solicited through the Oregon Department of Environmental Quality's Recycling Collector Survey to the Morrow County waste shed representative on an annual basis.<br>[Final Order on ASC, Public Services Condition 5] |
| GEN-PS-02 | The certificate holder shall construct turbine towers with no exterior ladders or access to the turbine blades and shall install locked tower access doors. The O&M buildings shall be fenced. The certificate holder shall keep tower access doors and O&M buildings locked at all times, except when authorized personnel are present.<br>[Final Order on ASC, Public Services Condition 11] |

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| GEN-PS-03 | Prior to construction and operation of the facility, , the certificate holder must provide employee fire prevention and response training that includes instruction on facility fire hazards, fire safety, emergency notification procedures, use of fire safety equipment, and fire safety rules and regulations. The certificate holder shall notify the department and the first-response agencies listed in the Emergency Management Plan developed to comply with Public Services Condition 13 at least 30 days prior to the annual training to provide an opportunity to participate in the training. Equivalent training shall be provided to new employees or subcontractors working on site that are hired during the fire season. The certificate holder must retain records of the training and provide them to the department upon request.<br>[Final Order on ASC, Public Services Condition 18] |
| GEN-PS-04 | The certificate holder shall design, construct and maintain the battery storage systems within a 100 foot vegetation free zone.<br>[Final Order on AMD2, Public Services Condition 23] |
| ***STANDARD: PUBLIC HEALTH AND SAFETY FOR WIND FACILITIES (WF) [OAR 345-024-0010]*** | |
| GEN-WF-01 | During construction and operation, the certificate holder shall follow manufacturers' recommended handling instructions and procedures to prevent damage to turbine or turbine tower components.<br>[Final Order on ASC, Public Health and Safety Standards for Wind Facilities Condition 3] |
| GEN-WF-02 | The certificate holder shall notify the department, the Morrow County Planning Department and the Umatilla County Planning Department within 72 hours of any accidents including mechanical failures on the site associated with construction or operation of the facility that may result in public health or safety concerns.<br>[Final Order on ASC, Public Health and Safety Standards for Wind Facilities Condition 5] |

### 4.3 Pre-Construction (PRE) Conditions

| Condition Number | Pre-Construction (PRE) Conditions |
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| ***STANDARD: ORGANIZATIONAL EXPERTISE (OE) [OAR 345-022-0010]*** | |
| PRE-OE-01 | Before beginning construction, the certificate holder shall notify the department of the identity and qualifications of the major design, engineering and construction contractor(s) for the facility. The certificate holder shall select contractors that have substantial experience in the design, engineering and construction of similar facilities. The certificate holder shall report to the department any changes of major contractors.<br>[Final Order on ASC, Organizational Expertise Condition 1] |
| PRE-OE-02 | Before beginning construction, the certificate holder shall notify the department of the identity and qualifications of the construction manager to demonstrate that the construction manager is qualified in environmental compliance and has the capability to ensure compliance with all site certificate conditions.<br>[Final Order on ASC, Organizational Expertise Condition 2] |
| PRE-OE-03 | Prior to construction, the certificate holder shall contractually require all construction contractors and subcontractors involved in the construction of the facility to comply with all applicable laws and regulations and with the terms and conditions of the site certificate. Such contractual provisions shall not operate to relieve the certificate holder of responsibility under the site certificate.<br>[Final Order on ASC, Organizational Expertise Condition 3] |
| PRE-OE-04 | Before beginning construction, the certificate holder shall notify the department before conducting any work on the site that does not qualify as surveying, exploration, or other activities to define or characterize the site. The notice must include a description of the work and evidence that its value is less than $250,000 or evidence that the certificate holder has satisfied all conditions that are required prior to beginning construction.<br>[Final Order on ASC, Organizational Expertise Condition 4] |
| PRE-OE-05 | Prior to construction, the certificate holder must provide the department and Umatilla and Morrow Counties with the name(s) and location(s) of the aggregate source and evidence of the source's county permit(s).<br>[Final Order on ASC, Organizational Expertise Condition 7] |
| PRE-OE-06 | The certificate holder must:<br>a. Prior to construction of wind facility components, provide evidence to the department and Morrow and Umatilla counties that the third party that will construct, own and operate the interconnection transmission line has obtained all necessary approvals and permits for that interconnection transmission line and that the certificate holder has a contract with the third party for use of the transmission line.<br>b. Prior to construction of solar facility components approved in the Fourth Amended Site Certificate, provide to the Department a list of all third-party permits that would normally be governed by the site certificate and that are necessary for construction and operation (e.g. Water Pollution Control Facilities Permit, Air Contaminant Discharge Permit, Limited Water Use License). Once obtained, the certificate holder shall provide copies of third-party permits to the Department.<br>c. During construction and operation, promptly report to the Department if any third-party permits referenced in sub(b) of this condition have been cited for a Notice of Violation. |

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| ***STANDARD: STRUCTURAL (SS) [OAR 345-022-0020]*** | |
| PRE-SS-01 | Before beginning construction, the certificate holder must:<br>a) Submit a protocol to the Department and Oregon Department of Geology & Mineral Industries (DOGAMI), for review, with the applicable codes, standards, and guidelines to be used, and proposed geotechnical work to be conducted for the site-specific geotechnical investigation report.<br>b) Following receipt and review of Department and DOGAMI comments on the protocol per (a), the certificate holder shall conduct a site-specific geological and geotechnical investigation, and shall report its findings to DOGAMI and the department. The report shall be used by the certificate holder in final facility layout and design. The department shall review, in consultation with DOGAMI, and confirm that the investigation report includes an adequate assessment of the following information:<br>• Subsurface soil and geologic conditions of the site boundary<br>• Define and delineate geological and geotechnical hazards, and means to mitigate these hazards<br>• Geotechnical design criteria and data for the turbine foundations, foundations of substations, O&M buildings, battery storage systems, roads, and other related and supporting facilities<br>• Design data for installation of underground and overhead collector lines, and overhead transmission lines<br>• Investigation of specific areas with potential for slope instability and landslide hazards. Landslide hazard evaluation shall be conducted by LIDAR and field work, as recommended by DOGAMI<br>• Investigations of the swell and collapse potential of loess soils within the site boundary.<br>[Final Order on ASC, Structural Standard Condition 1; AMD2] |
| PRE-SS-02 | Prior to construction, the certificate holder shall include as part of the geotechnical investigation required per Structural Standard Condition 1, an investigation of all potentially active faults within the site boundary, including the fault labeled as 2438 on Figures H-1 and H-2 of ASC Exhibit H. The investigation shall include a description of the potentially active faults, their potential risk to the facility, and any additional mitigation that will be undertaken by the certificate holder to ensure safe design, construction, and operation of the facility.<br>[Final Order on ASC, Structural Standard Condition 3] |
| PRE-SS-03 | Prior to construction, the certificate holder shall include as part of the geotechnical investigation required per Structural Standard Condition 1 an investigation of specific areas with potential for slope instability and shall site turbine strings appropriate to avoid potential hazards. The landslide hazards shall be investigated and mapped before final facility layout and design. The landslide hazard evaluation shall be conducted by a combination of LIDAR and field work.<br>[Final Order on ASC, Structural Standard Condition 4] |
| PRE-SS-04 | Prior to construction, the certificate holder shall include as part of the geotechnical investigation required per Structural Standard Condition 1, an investigation of the swell and collapse potential of loess soil in the site boundary. Based on the results of the investigation, the certificate holder shall include mitigation measures including, as necessary, over-excavating and replacing loess soil with structural fill, wetting and compacting, deep foundations, or avoidance of specific areas.<br>[Final Order on ASC, Structural Standard Condition 5] |
| ***STANDARD: SOIL PROTECTION (SP) [OAR 345-022-0022]*** | |
| PRE-SP-01 | Prior to beginning construction, the certificate holder shall provide a copy of a DEQ-approved construction Spill Prevention Control and Countermeasures (SPCC) plan, to be implemented during |

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| | facility construction. The SPCC plan shall include the measures described in Exhibit I of ASC and in the final order approving the site certificate.<br>[Final Order on ASC, Soil Protection Condition 3] |

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| PRE-SP-02 | Prior to construction, the certificate holder shall ensure that the final Revegetation Plan includes a program to protect and restore agricultural soils temporarily disturbed during facility construction. As described in the final order, agriculture soils shall be properly excavated, stored, and replaced by soil horizon. Topsoil shall be preserved and replaced. The Revegetation Plan shall be finalized pursuant to Fish and Wildlife Habitat Condition 11.<br>[Final Order on ASC, Soil Protection Condition 4] |
| PRE-SP-03 | Prior to beginning construction of the O&M buildings, the certificate holder shall secure any necessary septic system permits from DEQ. Copies of the necessary permits must be provided to the department prior to beginning construction of the O&M buildings.<br>[Final Order on ASC, Soil Protection Condition 7] |
| ***STANDARD: LAND USE (LU) [OAR 345-022-0030]*** | |
| PRE-LU-01 | Before beginning construction, the certificate holder shall complete the following:<br>a. Pay the requisite fee and obtain a Zoning Permit from Morrow County for all facility components sited in Morrow County; and<br>b. Obtain all other necessary local permits, including building permits.<br>c. Provide the county with a building permit application, a third party technical report which includes:<br>1. Evaluates fire hazards and;<br>2. Presents mitigation and recommendations for a fire suppression system designed for the battery storage systems.<br>d. The certificate holder shall provide copies of the third-party technical report and issued permits to the Department.<br>[Final Order on ASC, Land Use Condition 3; AMD2] |
| PRE-LU-02 | Before beginning construction, the certificate holder shall pay the requisite fee and obtain a Conditional Use Permit as required under Morrow County Zoning Ordinance Article 6 Section 6.015.<br>[Final Order on ASC, Land Use Condition 5] |
| PRE-LU-03 | Before beginning construction, the certificate holder shall prepare a Weed Control Plan that is consistent with Morrow and Umatilla County weed control requirements to be approved by the department. The department shall consult with Morrow and Umatilla counties and ODFW. The final plan must be submitted to the department no less than 30 days prior to the beginning of construction. The certificate holder shall implement the requirements of the approved plan during all phases of construction and operation of the facility.<br>[Final Order on ASC, Land Use Condition 6] |
| PRE-LU-04 | Before beginning construction, the certificate holder shall record in the real property records of Morrow County a Covenant Not to Sue with regard to generally accepted farming practices on adjacent farmland.<br>[Final Order on ASC, Land Use Condition 7] |
| PRE-LU-05 | Prior to beginning construction, the certificate holder shall consult with surrounding landowners and lessees and shall consider proposed measures to reduce or avoid any adverse impacts to farm practices on surrounding lands and to avoid any increase in farming costs during construction and operation of the facility. Prior to beginning construction, the certificate holder shall provide evidence of this consultation to the department, Morrow County, and Umatilla County.<br>[Final Order on ASC, Land Use Condition 12] |

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| PRE-LU-06 | Before beginning construction, the certificate holder shall work with the Morrow County Road Department to identify specific construction traffic related concerns, and develop a traffic management plan that specifies necessary traffic control measures to mitigate the effects of the temporary increase in traffic. The certificate holder must provide a copy of the traffic management plan to the department and Morrow County, and must implement the traffic management plan during construction.<br>[Final Order on ASC, Land Use Condition 13] |
| PRE-LU-07 | Before beginning construction, the certificate holder must:<br>a. Pay the requisite fee(s) and obtain a Zoning Permit(s) from Umatilla County for facility components sited within Umatilla County, including, but not limited to, turbines, substation, O&M building, and the intraconnection line.<br>b. Provide the Department and county with a building permit application that includes a third party technical report which:<br>1. Evaluates fire hazards, and<br>2. Presents mitigation and recommendations for a fire suppression system designed for the battery storage systems.<br>c. The certificate holder shall provide copies of the third-party technical report and issued permits to the Department.<br>[Final Order on ASC, Land Use Condition 15; AMD2] |
| PRE-LU-08 | Prior to facility construction, the certificate holder shall install gates and no trespassing signs at all private access roads established or improved for the purpose of facility construction and operation if requested by the underlying landowner.<br>[Final Order on ASC, Land Use Condition 18; AMD4] |
| PRE-LU-09 | Before beginning construction, the certificate holder shall record in the real property records of Umatilla County a Covenant Not to Sue with regard to generally accepted farming practices on adjacent farmland.<br>[Final Order on ASC, Land Use Condition 21] |
| ***STANDARD: RETIREMENT AND FINANCIAL ASSURANCE (RT) [OAR 345-022-0050]*** | |
| PRE-RF-01 | Before beginning construction of the facility, the certificate holder shall submit to the State of Oregon, through the Council, a bond or letter of credit in a form and amount satisfactory to the Council to restore the site to a useful, non-hazardous condition. The certificate holder shall maintain a bond or letter of credit in effect at all times until the facility has been retired. The Council may specify different amounts for the bond or letter of credit during construction and during operation of the facility.<br>[Final Order on ASC, Retirement and Financial Assurance Condition 4]<br>[Mandatory Condition OAR 345-025-0006(8)] |

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| PRE-RF-02 | Before beginning construction of the:<br>a. Wind energy facility components or its related or supporting facilities, the certificate holder shall submit to the State of Oregon, through the Council, a bond or letter of credit naming the State of Oregon, acting by and through the Council, as beneficiary or payee. The initial bond or letter of credit amount for the wind facility components is $~~19.5~~ 16.1 million dollars (Q3 2018 dollars), to be adjusted to the date of issuance, and adjusted on an annual basis thereafter, as described in sub-paragraph (2) of this condition:<br>b. Solar energy facility components or its related or supporting facilities, the certificate holder shall submit to the State of Oregon, through the Council, a bond or letter of credit naming the State of Oregon, acting by and through the Council, as beneficiary or payee. The initial bond or letter of credit amount for the solar facility components is $9.4 million dollars (Q4 2018 dollars), to be adjusted to the date of issuance, and adjusted on an annual basis thereafter, as described in sub-paragraph (2) of this condition:<br>1. The certificate holder may adjust the amount of the initial bond or letter of credit based on the final design configuration of the facility. Any revision to the restoration costs should be adjusted to the date of issuance as described in (2) and subject to review and approval by the Council.<br>2. The certificate holder shall adjust the amount of the bond or letter of credit using the following calculation:<br>i. Adjust the amount of the bond or letter of credit (expressed in Q3 2018 dollars for wind facility components and Q4 2018 dollars for solar facility components)) to present value, using the U.S. Gross Domestic Product Implicit Price Deflator, Chain-Weight, as published in the Oregon Department of Administrative Services' "Oregon Economic and Revenue Forecast" or by any successor agency and using the third quarter 2018 index value and the quarterly index value for the date of issuance of the new bond or letter of credit. If at any time the index is no longer published, the Council shall select a comparable calculation to adjust third quarter 2018dollars to present value.<br>ii. Round the result total to the nearest $1,000 to determine the financial assurance amount.<br>3. The certificate holder shall use an issuer of the bond or letter of credit approved by the Council.<br>4. The certificate holder shall use a form of bond or letter of credit approved by the Council. The certificate holder shall describe the status of the bond or letter of credit in the annual report submitted to the Council under OAR 345-026-0080. The bond or letter of credit shall not be subject to revocation or reduction before retirement of the facility site.<br>[Final Order on ASC, Retirement and Financial Assurance Condition 5; AMD2; AMD4] |

| *STANDARD: FISH AND WILDLIFE HABITAT (FW) [OAR 345-022-0060]* | |
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| PRE-FW-01 | Prior to final site design and facility layout, the certificate holder shall conduct a field-based habitat survey to confirm the habitat categories of all areas that will be affected by facility components, as well as the locations of any sensitive resources such as active raptor and other bird nests. The survey shall be planned in consultation with the department and ODFW, and survey protocols shall be confirmed with the department and ODFW. Following completion of the field survey, and final layout design and engineering, the certificate holder shall provide the department and ODFW a report containing the results of the survey, showing expected final location of all facility components, the habitat categories of all areas that will be affected by facility components, and the locations of any sensitive resources.<br>The report shall also include an updated version of Table FW-1 Potential Temporary and Permanent Impacts by Habitat Category and Type of the final order, showing the acres of expected temporary and permanent impacts to each habitat category, type, and sub-type. The pre-construction survey shall be used to complete final design, facility layout, and micrositing of facility components. As part of the report, the certificate holder shall include its impact assessment methodology and calculations, including assumed temporary and permanent impact acreage for each transmission structure, wind turbine, access road, and all other facility components. If construction laydown yards are to be retained post construction, due to a landowner request or otherwise, the construction laydown yards must be calculated as permanent impacts, not temporary.<br><br>In classifying the affected habitat into habitat categories, the certificate holder shall consult with the department and ODFW. The certificate holder shall not begin construction of the facility until the habitat assessment, categorization, and impact assessment has been approved by the department, in consultation with ODFW. The certificate holder shall not construct any facility components within areas of Category 1 habitat and shall avoid temporary disturbance of Category 1 habitat.<br>[Final Order on ASC, Fish and Wildlife Habitat Condition 1] |
| PRE-FW-02 | Prior to construction, the certificate holder shall finalize and implement the Wildlife Monitoring and Mitigation Plan (WMMP) provided in Attachment F of this order, based on the final facility design, as approved by the department in consultation with ODFW.<br>a. The final WMMP must be submitted and ODOE's concurrence received prior to the beginning of construction. ODOE shall consult with ODFW on the final WMMP. The certificate holder shall implement the requirements of the approved WMMP during all phases of construction and operation of the facility.<br>b. The WMMP may be amended from time to time by agreement of the certificate holder and the Oregon Energy Facility Siting Council ("Council"). Such amendments may be made without amendment of the site certificate. The Council authorizes the Department to agree to amendments to this plan. The Department shall notify the Council of all amendments, and the Council retains the authority to approve, reject, or modify any amendment of the WMMP agreed to by the Department.<br>[Final Order on ASC, Fish and Wildlife Habitat Condition 4] |
| PRE-FW-03 | Prior to construction, the certificate holder shall flag all environmentally sensitive areas as restricted work zones. Restricted work zones shall include but not be limited to areas with sensitive or protected plant species, including candidate species, wetlands and waterways that are not authorized for construction impacts, areas with seasonal restrictions, and active state sensitive species bird nests.<br>[Final Order on ASC, Fish and Wildlife Habitat Condition 8] |

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| PRE-FW-04 | Before beginning construction the certificate holder shall prepare and receive approval from the department of a final Habitat Mitigation Plan. The final Habitat Mitigation Plan shall be based on the final facility design and shall be approved by the department in consultation with ODFW. The Council retains the authority to approve, reject or modify the final HMP.<br>a. The final Habitat Mitigation Plan and the department's approval must be received prior to beginning construction. The department shall consult with ODFW on the final plan. The certificate holder shall implement the requirements of the approved plan during all phases of construction and operation of the facility.<br>b. The certificate holder shall calculate the size of the habitat mitigation area according to the final design configuration of the facility and the estimated areas of habitat affected in each habitat category, in consultation with the department, as per the pre-construction survey results and impact assessment calculations called for in Fish and Wildlife Habitat Condition 1.<br>c. The certificate holder shall acquire the legal right to create, enhance, maintain, and protect the habitat mitigation area, as long as the site certificate is in effect, by means of an outright purchase, conservation easement or similar conveyance and shall provide a copy of the documentation to the department prior to the start of construction. Within the habitat mitigation area, the certificate holder shall improve the habitat quality as described in the final Habitat Mitigation Plan.<br>d. The certificate holder shall provide a habitat assessment of the habitat mitigation area, based on a protocol approved by the Department in consultation with ODFW, which includes methodology, habitat map and available acres by habitat category and subtype in tabular format.<br>e. The final HMP shall include an implementation schedule for all mitigation actions, including securing the conservation easement, conducting the ecological uplift actions at the habitat mitigation area, revegetation and restoration of temporarily impacted areas, and monitoring. The mitigation actions shall be implemented according to the following schedule, as included in the HMP:<br>i. Restoration and revegetation of temporary construction-related impact area shall be conducted as soon as possible following construction.<br>ii. The certificate holder shall obtain legal authority to conduct the required mitigation work at the compensatory habitat mitigation site before commencing construction. The habitat enhancement actions at the compensatory habitat mitigation site shall be implemented concurrent with construction.<br>f. The final HMP shall include a monitoring and reporting program for evaluating the effectiveness of all mitigation actions, including restoration of temporarily impacted areas and ecological uplift actions at the habitat mitigation area.<br>g. The final HMP shall include mitigation in compliance with the Council's Fish and Wildlife Habitat standard, including mitigation for temporary impacts to Category 4 habitat (shrub-steppe habitat); and, mitigation for all Category 2 habitat impacts that meet the mitigation goal of no net loss of habitat quality or quantity, plus a net benefit of habitat quality or quantity.<br>h. The final HMP may be amended from time to time by agreement of the certificate holder and the Oregon Energy Facility Siting Council ("Council"). Such amendments may be made without amendment of the site certificate. The Council authorizes the Department to agree to amendments to this plan. The Department shall notify the Council of all amendments, and the Council retains the authority to approve, reject, or modify any amendment of this plan agreed to by the Department.<br>[Final Order on ASC, Fish and Wildlife Habitat Condition 10] |
| PRE-FW-05 | Before beginning construction, the certificate holder shall prepare and receive approval of a final Revegetation Plan, provided as Attachment E to this order, from the department, in consultation |

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| | with Umatilla and Morrow counties and ODFW. The certificate holder shall implement the requirements of the approved plan during all phases of construction and operation of the facility.<br>[Final Order on ASC, Fish and Wildlife Habitat Condition 11] |
| ***STANDARD: THREATENED AND ENDANGERED SPECIES (TE) [OAR 345-022-0070]*** | |
| PRE-TE-01 | Prior to construction, the certificate holder shall determine the boundaries of Category 1 Washington ground squirrel habitat. The certificate holder shall hire a qualified professional biologist who has experience in detection of Washington ground squirrel to conduct pre-construction surveys using a survey protocol approved by the department in consultation with ODFW. The biologist shall survey all areas of suitable habitat within 1,000 feet of any ground disturbing activity. Ground disturbing activity refers to any potential impact, whether permanent or temporary. The protocol surveys shall be conducted in the active squirrel season (March 1 to May 31) prior to construction commencement. The protocol survey is valid for three years. If construction begins within three years of conducting the protocol survey, but not within one year of the protocol survey, the certificate holder shall conduct a pre-construction survey only within areas of suitable Washington ground squirrel habitat where ground disturbing activity would occur.<br><br>The certificate holder shall provide written reports of the surveys to the department and to ODFW and shall identify the boundaries of Category 1 Washington ground squirrel (WGS) habitat. The certificate holder shall not begin construction within suitable habitat until the identified boundaries of Category 1 WGS habitat have been approved by the department, in consultation with ODFW.<br><br>The certificate holder shall avoid any permanent or temporary disturbance in all Category 1 WGS habitat. The certificate holder shall ensure that these sensitive areas are correctly marked with exclusion flagging and avoided during construction.<br>[Final Order on ASC, Threatened and Endangered Species Condition 1] |
| PRE-TE-02 | In accordance with Fish and Wildlife Habitat Condition 4, prior to construction, the certificate holder shall finalize and implement the Wildlife Monitoring and Mitigation Plan (WMMP) provided in Attachment F of this order, based on the final facility design, as approved by the department in consultation with ODFW. The final WMMP shall include a program to monitor potential impacts from facility operation on Washington ground squirrel. Monitoring shall be of any known colonies and shall be completed on the same schedule as the raptor nest monitoring for the facility. The monitoring surveys shall include returning to the known colonies to determine occupancy and the extent of the colony as well as a general explanation of the amount of use at the colony. If the colony is not found within the known boundary of the historic location a survey 500 feet out from the known colony will be conducted to determine if the colony has shifted over time. Any new colonies that are located during other monitoring activities, such as raptor nest monitoring surveys, shall be documented and the extent of those colonies should be delineated as well. These newly discovered colonies shall also be included in any future WGS monitoring activities.<br>[Final Order on ASC, Threatened and Endangered Species Condition 2] |
| PRE-TE-03 | To avoid potential impacts to Laurent's milkvetch, the certificate holder must:<br>i. Conduct preconstruction plant surveys for Laurent's milkvetch within 100-feet of temporary and permanent disturbance from all facility components, unless extent of survey area within suitable habitat from temporary and permanent disturbance is otherwise agreed upon by the Department on consultation with Oregon Department of Agriculture. If the species is found to occur, the certificate holder must install protection flagging around the plant population and avoid any ground disturbance within this zone. |

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| | ii. Ensure that any plant protection zone established under (i) above is included on construction plans showing the final design locations.<br>iii. If herbicides are used to control weeds, the certificate holder shall follow the manufacturer's guidelines in establishing a buffer area around confirmed populations of Laurent's milkvetch. Herbicides must not be used within the established buffers.<br>iv. If avoidance cannot be maintained, the certificate holder may request that the Department consider an avoidance exception, authorized through Council concurrence as further described below. The exception request must include an impact assessment and mitigation plan for the affected species including but not be limited to:<br>• Literature review and/or field studies that inform the current status of the species within the survey area or region, if survey area does not contain sufficient information to develop a statistically viable approach for determining impact significance;<br>• A description of the individual(s) or population(s) identified within the survey area that would be avoided and impacted;<br>• An evaluation of facility impacts on the survival or recovery of the species, in accordance with the Threatened and Endangered Species standard;<br>• Proposed mitigation measures such as: funded studies that improve understanding of reproductive biology and pollination; development of seed germination, propagation, and transplanting protocols; and/or, compensatory mitigation project including conservation easement(s) and species propagation, protection, and habitat enhancement measures, and/or other proposed mitigation measures that would benefit the affected species.<br>• The Department's review and determination of the exception request shall be conducted in consultation with the Oregon Department of Agriculture, or a third-party consultant. The Department's determination on the exception request must be concurred with by Council. Council retains authority to reject, modify or concur with the exception request.<br>[Final Order on ASC; AMD3; Threatened and Endangered Species Condition 3; AMD4] |
| ***STANDARD: HISTORIC, CULTURAL, AND ARCHAEOLOGICAL RESOURCES (HC) [OAR 345-022-0090]*** | |
| PRE-HC-01 | Before beginning construction, the certificate holder shall provide to the department a map showing the final design locations of all components of the facility, the areas that will be temporarily disturbed during construction and the areas that were surveyed in 2013-14 for historic, cultural, and archaeological resources.<br>[Final Order on ASC, Historic, Cultural, and Archeological Resources Condition 1] |
| PRE-HC-02 | Before beginning construction, the certificate holder shall mark the buffer areas established under Historic, Cultural, and Archeological Resources Condition 3 for all identified historic, cultural, or archaeological resource sites (including those of unknown age) on construction maps and drawings as "no entry" areas. A copy of current maps and drawings must be maintained onsite during construction and made available to the department upon request.<br>[Final Order on ASC, Historic, Cultural, and Archeological Resources Condition 2] |
| PRE-HC-03 | Before beginning construction, the certificate holder shall ensure that a qualified archeologist, as defined in OAR 736-051-0070, trains construction contractors on how to identify sensitive historic, cultural, and archaeological resources present onsite and on measures to avoid accidental damage to identified resource sites. Records of such training must be maintained onsite during construction, and made available to the department upon request. |

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| | [Final Order on ASC, Historic, Cultural, and Archeological Resources Condition 4] |
| ***STANDARD: PUBLIC SERVICES (PS) [OAR 345-022-0110]*** | |
| PRE-PS-01 | Prior to construction, the certificate holder shall prepare a Traffic Management Plan that includes the procedures and actions described in this order and the mitigation measures identified in ASC Exhibit U, Section 3.5.4. The plan shall be approved by the department in consultation with the appropriate transportation service providers. The plan shall be maintained onsite and implemented throughout construction of the facility.<br><br>In addition, the certificate holder shall include the following information in the plan:<br><br>a. Procedures to provide advance notice to all affected local jurisdictions and adjacent landowners of construction deliveries and the potential for heavy traffic on local roads;<br>b. A policy of including traffic control procedures in contract specifications for construction of the facility;<br>c. Procedures to maintain at least one travel lane at all times to the extent reasonably possible so that roads will not be closed to traffic because of construction vehicles;<br>d. A policy of ensuring that no equipment or machinery is parked or stored on any county road whether inside or outside the site boundary. The certificate holder may temporarily park equipment off the road but within county rights-of-way with the approval of the Morrow County and Umatilla County Public Works Departments;<br>e. A policy to encourage and promote carpooling for the construction workforce; and<br>f. Procedures to keep state highways and county roads free of gravel that may be tracked out on intersecting roads at facility access points.<br>[Final Order on ASC, Public Services Condition 6] |

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| PRE-PS-02 | Before beginning construction, the certificate holder must enter into Road Use Agreements with the Morrow County and Umatilla County Public Works Departments. The Agreements must include, at a minimum, a pre-construction assessment of road surfaces under Morrow County and Umatilla County jurisdiction, construction monitoring, and post-construction inspection and repair. A copy of the Road Use Agreements with Morrow County and Umatilla County must be submitted to the department before beginning construction. If required by Morrow County or Umatilla County, the certificate holder shall post bonds to ensure funds are available to repair and maintain roads affected by the facility.<br>[Final Order on ASC, Public Services Condition 7] |
| PRE-PS-03 | The certificate holder shall design and construct new access roads and private road improvements to standards approved by Umatilla County or Morrow County. Where modifications of county roads are necessary, the certificate holder shall construct the modifications entirely within the county road rights-of-way and in conformance with county road design standards subject to the approval of the Umatilla County and Morrow County Public Works Departments.<br>[Final Order on ASC, Public Services Condition 8] |
| PRE-PS-04 | Before beginning construction, the certificate holder shall submit to the Federal Aviation Administration (FAA) and the Oregon Department of Aviation an FAA Form 7460-1 Notice of Proposed Construction or Alteration for each turbine. Before beginning construction, the certificate holder shall submit to the department the results of the Oregon Department of Aviation aeronautical study and determination. If the department, in consultation with the Oregon Department of Aviation, determines that any turbine would adversely impact an airport's ability to provide service by obstructing the airport's primary or horizontal surface, the department, in consultation with the Oregon Department of Aviation and the certificate holder, shall determine appropriate mitigation, if any, prior to construction.<br>[Final Order on ASC, Public Services Condition 9] |

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| PRE-PS-05 | Prior to construction, the certificate holder shall prepare an Emergency Management Plan that includes the procedures and actions described in this order and in ASC Exhibit U. The certificate holder shall submit the plan to ODOE for review and approval in consultation with the appropriate local fire protection districts (including the City of Heppner Volunteer Fire Department, Ione Rural Fire Protection District, and Echo Rural Fire Protection District) prior to construction. The plan shall be maintained onsite and implemented throughout construction and operation of the facility. Any updates to the plan shall be provided to the department within 30 days. All onsite workers shall be trained on the fire prevention and safety procedures contained in the plan prior to working on the facility.<br><br>Additional information that shall be included in the plan:<br>a. Current contact information of at least two facility personnel available to respond on a 24-hour basis in case of an emergency on the facility site. The contact information must include name, telephone number(s), physical location, and email address for the listed contact(s). An updated list must be provided to the fire protection agencies immediately upon any change of contact information. A copy of the contact list, and any updates as they occur, must also be provided to the Department, along with a list of the agencies that received the contact information.<br>b. Identification of agencies that participated in developing the plan;<br>c. Identification of agencies that are designated as first response agencies or are included in any mutual aid agreements with the facility;<br>d. A list of any other mutual aid agreements or fire protection associations in the vicinity of the facility;<br>e. Contact information for each agency listed above;<br>f. Communication protocols for both routine and emergency events and the incident command system to be used in the event a fire response by multiple agencies is needed at the facility;<br>g. Access and fire response at the facility site during construction and operations. Fire response plans during construction should address regular and frequent communication amongst the agencies regarding the number and location of construction sites within the site boundary, access roads that are completed and those still under construction, and a temporary signage system until permanent addresses and signs are in place;<br>h. The designated meeting location in case of evacuation;<br>i. Staff training requirements; and<br>Copies of mutual aid, fire protection association, or other agreements entered into concerning fire protection at the facility site.<br>[Final Order on ASC, Public Services Condition 13] |
| PRE-PS-06 | Before beginning construction, the certificate holder shall develop and implement, or require its contractors to develop and implement, a site health and safety plan that informs workers and others onsite about first aid techniques and what to do in case of an emergency. The health and safety plan will include preventative measures, important telephone numbers, the locations of onsite fire extinguishers, and the names, locations and contact information of nearby hospitals. All onsite workers shall be trained in safety and emergency response, as per the site health and safety plan. The site health and safety plan must be updated on an annual basis, maintained throughout the construction and operations and maintenance phases of the facility, and available upon request by the department.<br>[Final Order on ASC, Public Services Condition 20] |

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| PRE-PS-07 | Before beginning construction, the certificate holder shall ensure that all construction workers are certified in first aid, cardio pulmonary resuscitation (CPR), and the use of an automated external defibrillator (AED). The certificate holder must retain records of the certifications and provide them to the department upon request. The certificate holder shall also ensure that an AED is available onsite at all times that construction activities are occurring.<br>[Final Order on ASC, Public Services Condition 21] |
| ***STANDARD: WASTE MINIMIZATION (WM,) [OAR 345-022-0120]*** | |
| PRE-WM-01 | Prior to construction, the certificate holder shall develop a construction waste management plan, to be implemented during all phases of facility construction, which includes at a minimum the following details:<br>a. Specification of the number and types of waste containers to be maintained at construction sites and construction yards<br>b. Description of waste segregation methods for recycling or disposal.<br>c. Names and locations of appropriate recycling and waste disposal facilities, collection requirements, and hauling requirements to be used during construction.<br><br>The certificate holder shall maintain a copy of the construction waste management plan onsite and shall provide to the department a report on plan implementation in the 6-month construction report required pursuant to OAR 345-026-0080(1)(a).<br>[Final Order on ASC, Waste Minimization Condition 2] |
| PRE-WM-02 | Prior to construction, the certificate holder shall investigate and confirm that no surfaces waters, shallow groundwater, or drinking water sources will be adversely impacted by the usage of concrete washout water in the foundations of facility components, and shall submit an investigation report to the department. Prior to construction, the department, in consultation with DEQ, shall review the results of the investigation report and shall verify that the plan to dispose of concrete washout water in the foundations of facility components is unlikely to adversely impact surface waters, shallow groundwater, or drinking water sources. The applicant's investigation shall be based on the anticipated final facility layout and design. If the results of the investigation show that the proposed concrete washout water disposal method would cause adverse impacts to surface water, shallow groundwater, or drinking water sources, the applicant shall propose mitigation measures to reduce potential impacts, for review and approval by the department in consultation with DEQ, prior to construction.<br>[Final Order on ASC, Waste Minimization Condition 3] |
| ***STANDARD: SITING STANDARDS FOR TRANSMISSION LINES (TL) [OAR 345-024-0090]*** | |
| PRE-TL-01 | Prior to construction, the certificate holder shall schedule a time to brief the OPUC Safety, Reliability, and Security Division (Safety) Staff as to how it will comply with OAR Chapter 860, Division 024 during design, construction, operations, and maintenance of the facilities.<br>[Final Order on ASC, Siting Standard Condition 2] |

| ***STANDARD: NOISE CONTROL REGULATION (NC) [OAR 345-035-0035]*** | |
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| PRE-NC-01 | Prior to construction, the certificate holder shall provide to the department:<br>a. Information that identifies the final design locations of all facility components to be built at the facility;<br>b. The maximum sound power level for the facility components and the maximum sound power level and octave band data for the turbine type(s), transformers (substation and solar array), invertors, AC- and DC-coupled battery storage cooling system selected for the facility based on manufacturers' warranties or confirmed by other means acceptable to the department;<br>c. The results of the noise analysis of the final facility design performed in a manner consistent with the requirements of OAR 340-035-0035(1)(b)(B) (iii)(IV) and (VI). The analysis must demonstrate to the satisfaction of the department that the total noise generated by the facility (including turbines, transformers, invertors, AC- and DC-coupled battery storage cooling systems) would meet the ambient noise degradation test and maximum allowable test at the appropriate measurement point for all potentially-affected noise sensitive properties, or that the certificate holder has obtained the legally effective easement or real covenant for expected exceedances of the ambient noise degradation test described (d) below. The analysis must also identify the noise reduction operation (NRO) mode approach that will be used during facility operation and include a figure that depicts the turbines that will be operating in NRO mode and the associated dBA reduction level; if required to meet the maximum allowable decibel threshold of 50 dBA; and,<br>d. For each noise-sensitive property where the certificate holder relies on a noise waiver to demonstrate compliance in accordance with OAR 340-035-0035(1)(b)(B)(iii)(III), a copy of the legally effective easement or real covenant pursuant to which the owner of the property authorizes the certificate holder's operation of the facility to increase ambient statistical noise levels $L_{10}$ and $L_{50}$ by more than 10 dBA at the appropriate measurement point. The legally effective easement or real covenant must: include a legal description of the burdened property (the noise sensitive property); be recorded in the real property records of the county; expressly benefit the property on which the wind energy facility is located; expressly run with the land and bind all future owners, lessees or holders of any interest in the burdened property; and not be subject to revocation without the certificate holder's written approval.<br>[Final Order on ASC; AMD3; Noise Control Condition 2] |

### 4.4 Construction (CON) Conditions

| Condition Number | Construction (CON) Conditions |
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| ***STANDARD: SOIL PROTECTION (SP) [OAR 345-022-0022]*** | |
| CON-SP-01 | During construction, the certificate holder shall conduct all work in compliance with a final Erosion and Sediment Control Plan (ESCP) that is satisfactory to the Oregon Department of Environmental Quality as required under the National Pollutant Discharge Elimination System Construction Stormwater Discharge General Permit 1200-C.<br>[Final Order on ASC, Soil Protection Condition 1] |
| CON-SP-02 | During construction, the erosion and sediment control best management practices and measures as described in ASC Exhibit I, Section 5.2 and listed in the final order approving the site certificate shall be included and implemented as part of the final ESCP.<br>[Final Order on ASC, Soil Protection Condition 2] |
| ***STANDARD: LAND USE (LU) [OAR 345-022-0030]*** | |
| CON-LU-01 | During construction, the certificate holder shall comply with the following requirements:<br>a. Construction vehicles shall use previously disturbed areas including existing roadways and tracks.<br>b. Temporary construction yards and laydown areas shall be located within the future footprint of permanent structures to the extent practicable.<br>c. New, permanent roadways will be the minimum width allowed while still being consistent with safe use and satisfying county road and safety standards.<br>d. Underground communication and electrical lines will be buried within the area disturbed by temporary road widening to the extent practicable.<br>[Final Order on ASC, Land Use Condition 8] |
| CON-LU-02 | During construction, the certificate holder shall install smooth turbine tower structures and turbine nacelles that lack perching or nesting opportunities for birds.<br>[Final Order on ASC, Land Use Condition 17] |
| CON-LU-03 | During construction, the certificate holder shall install the electrical cable collector system underground, where practicable. In agricultural areas, the collector system lines must be installed at a depth of 3 feet or deeper as necessary to prevent adverse impacts on agriculture operations. In all other areas, the collector system lines must be installed a minimum of 3 feet where practicable.<br>[Final Order on ASC, Land Use Condition 19] |
| ***STANDARD: FISH AND WILDLIFE HABITAT (FW) [OAR 345-022-0060]*** | |
| CON-FW-01 | No construction shall occur in mule deer winter range during winter, defined as December 1 to March 31. Mule deer winter range is based on data to be provided by ODFW at the time of construction. Upon request by the certificate holder, the Department may provide exceptions to this restriction. The certificate holder's request must include a justification for the request including any actions the certificate holder will take to avoid, minimize or mitigate impacts to mule deer winter range during winter in the relevant area. The Department will consult with ODFW on any request made under this condition.<br>[Final Order on ASC, Fish and Wildlife Habitat Condition 3; AMD4] |

<table>
<tr><td>CON-FW-02</td><td>Prior to construction, the certificate holder shall develop a construction plan that demonstrates construction activities within 0.25-mile of previously identified active nest sites are scheduled to avoid the sensitive nesting and breeding season. Previously identified active nest sites are those identified through the pre-construction raptor nest survey as required through Condition PRE-FW-01 and may also include any previously identified active nest sites from previous surveys.<br><br>During construction within the time periods listed below, the certificate holder shall implement buffer zones around active nest sites of the species listed below. Active nest sites shall be identified based on the Condition PRE-FW-01 pre-construction nest survey and be monitored during construction by a biological monitor, both of which shall be based on a protocol approved by the Department in consultation with ODFW- specifying methodology and frequency of monitoring. No ground-disturbing activities within the buffer zone shall occur during the seasonal restrictions. The construction workforce and facility employees must be provided maps with the locations of the buffer zones and be instructed to avoid ground-disturbing activity within the buffer zone during construction activities.<br><br><table><tr><th>Sensitive Status Species</th><th>Buffer Size (Radius Around Nest Site):</th><th>Sensitive Nesting and Breeding Season :</th></tr><tr><td>Western burrowing owl</td><td>0.25 mile</td><td>April 1 to August 15</td></tr><tr><td>Ferruginous hawk</td><td>0.25 mile</td><td>March 15 to August 15</td></tr><tr><td>Swainson’s hawk</td><td>0.25 mile</td><td>April 1 to August 15</td></tr></table><br>If avoidance within the buffer restrictions cannot be maintained, the certificate holder may request approval from the Department in consultation with ODFW on a mitigation and conservation strategy for condition compliance.<br>[Final Order on ASC; AMD3 Fish and Wildlife Habitat Condition 5; AMD4]</td></tr>
<tr><td>CON-FW-03</td><td>During construction, the certificate holder shall employ a qualified environmental professional to provide environmental training to all personnel prior to working onsite, related to sensitive species present onsite, precautions to avoid injuring or destroying wildlife or sensitive wildlife habitat, exclusion areas, permit requirements and other environmental issues. All personnel shall be given clear maps showing areas that are off-limits for construction, and shall be prohibited from working outside of the areas in the site boundary that have been surveyed and approved for construction. The certificate holder shall instruct construction personnel to report any injured or dead wildlife detected while on the site to the appropriate onsite environmental manager. Records of completed training shall be maintained onsite and made available to the department upon request.<br>[Final Order on ASC, Fish and Wildlife Habitat Condition 7]</td></tr>
<tr><td>CON-FW-04</td><td>During construction, the certificate holder shall employ at a minimum one environmental inspector to be onsite daily. The environmental inspector shall oversee permit compliance and construction, and ensure that known sensitive environmental resources are protected. The environmental inspector shall prepare a weekly report during construction, documenting permit compliance and documenting any corrective actions taken. Reports shall be kept on file and available for inspection by the department upon request.<br>[Final Order on ASC, Fish and Wildlife Habitat Condition 9]</td></tr>
<tr><td colspan="2">STANDARD: HISTORIC, CULTURAL, AND ARCHAEOLOGICAL RESOURCES (HC) [OAR 345-022-0090]</td></tr>
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| CON-HC-01 | Prior to construction activities, the certificate holder must flag or otherwise mark a 200-foot avoidance buffer around historic archaeological sites, as identified by the maps and drawings prepared in accordance with Historic, Cultural, and Archeological Resources Conditions 1 and 2. No disturbance is allowed within the buffer zones, unless resources assumed likely NRHP eligible (e.g. 6B2H-MC-ISO-17, WRII-BB-IS-01, WRII-DM-04) are concurred not likely NRHP eligible through SHPO review; or, a Historic, Cultural, and Archaeological Resources mitigation plan is submitted and accepted by the Department and SHPO which includes measures such as: additional archival and literature review; video media publications; public interpretation funding; or other form of compensatory mitigation deemed appropriate by the Department, in consultation with SHPO. For historic archaeological sites, an archeological monitor must be present if construction activities are required within 200-feet of sites identified as potentially eligible for listing on the National Register of Historic Places (NRHP) unless otherwise agreed to by the Department and SHPO. The certificate holder may use existing private roads within the buffer areas but may not widen or improve private roads within the buffer areas. The no-entry restriction does not apply to public road rights-of-way within buffer areas. Flagging or marking must be removed immediately upon cessation of activities in the area that pose a threat of disturbance to the site being protected.<br>[Final Order on ASC, Historic, Cultural, and Archeological Resources Condition 3; AMD4] |

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| CON-HC-02 | During construction, the certificate holder shall ensure that construction personnel cease all ground-disturbing activities in the immediate area if any archeological or cultural resources are found during construction of the facility until a qualified archeologist can evaluate the significance of the find. The certificate holder shall notify the department and the Oregon State Historic Preservation Office (SHPO) of the find. If ODOE, in consultation with SHPO, determines that the resource meets the definition of an archaeological object, archaeological site, or is eligible or likely to be eligible for listing on the (NRHP), the certificate holder shall, in consultation with the department, SHPO, interested Tribes and other appropriate parties, make recommendations to the Council for mitigation, including avoidance, field documentation and data recovery. The certificate holder shall not restart work in the affected area until the department, in consultation with SHPO, agree that the certificate holder has demonstrated that it has complied with archeological resources protection regulations.<br>[Final Order on ASC, Historic, Cultural, and Archeological Resources Condition 5] |
| ***STANDARD: PUBLIC SERVICES (PS) [OAR 345-022-0110]*** | |
| CON-PS-01 | During construction, the certificate holder shall include the following additional measures in the construction waste management plan required by Waste Minimization Condition 2:<br>a. Recycling steel and other metal scrap.<br>b. Recycling wood waste.<br>c. Recycling packaging wastes such as paper and cardboard.<br>d. Collecting non-recyclable waste for transport to a local landfill by a licensed waste hauler or by using facility equipment and personnel to haul the waste. Waste hauling by facility personnel within Morrow County shall be performed in compliance with the Morrow County Solid Waste Management Ordinance, which requires that all loads be covered and secured.<br>e. Segregating all hazardous and universal wastes such as used oil, oily rags and oil-absorbent materials, mercury-containing lights and lead-acid and nickel-cadmium batteries for disposal by a licensed firm specializing in the proper recycling or disposal of hazardous and universal wastes.<br>f. Discharging concrete truck rinse-out within foundation holes, completing truck wash-down off-site, and burying other concrete waste as fill on-site whenever possible.<br>[Final Order on ASC, Public Services Condition 3] |
| CON-PS-02 | During construction of the facility, the certificate holder shall provide for 24-hour on-site security, and shall establish effective communications between on-site security personnel and the Morrow County Sheriff's Office and Umatilla County Sheriff's Office.<br>[Final Order on ASC, Public Services Condition 10] |
| CON-PS-03 | During construction of the facility, the certificate holder shall ensure that turbine construction personnel are trained and equipped for fall protection, high angle, and confined space rescue. The certificate holder must retain records of the training and provide them to the department upon request.<br>[Final Order on ASC, Public Services Condition 14] |
| CON-PS-04 | During construction, the certificate holder shall design turbines to be constructed on concrete pads with a minimum of 10 feet of nonflammable and non-erosive ground cover on all sides. The certificate holder shall cover turbine pad areas with nonflammable, non-erosive material immediately following exposure during construction and shall maintain the pad area covering during facility operation.<br>[Final Order on ASC, Public Services Condition 16] |

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| CON-PS-05 | During construction the certificate holder must maintain an area clear of vegetation for fire prevention around construction sites, including turbines and towers and any areas where work includes welding, cutting, grinding, or other flame- or spark-producing operations.<br>[Final Order on ASC, Public Services Condition 17] |
| ***STANDARD: WASTE MINIMIZATION (WM) [OAR 345-022-0120]*** | |
| CON-WM-01 | During construction, the certificate holder shall require construction contractors to complete the following for any off-site disposal of excess soil during construction activities:<br>a. Obtain and provide the certificate holder with a signed consent agreement between contractor and the party receiving the earth materials authorizing the acceptance and disposal of the excess soil; and,<br>b. Confirm that all disposal sites have been inspected and approved by the certificate holder's environmental personnel to ensure that sensitive environmental resources, such as wetlands or high quality habitats, would not be impacted.<br>The certificate holder shall maintain copies of all signed consent agreements and disposal site inspection and approvals onsite and shall provide to the department in the 6-month construction report required pursuant to OAR 345-026-0080(1)(a).<br>[Final Order on ASC, Waste Minimization Condition 1] |
| ***STANDARD: PUBLIC HEALTH AND SAFETY FOR WIND FACILITIES (WF) [OAR 345-024-0010]*** | |
| CON-WF-01 | During construction, the certificate holder shall install pad-mounted step-up transformers at the base of each tower in steel boxes designed to protect the public from electrical hazards.<br>[Final Order on ASC, Public Health and Safety Standards for Wind Facilities Condition 1] |
| CON-WF-02 | Prior to and during operations the certificate holder shall:<br>a. Install and maintain self-monitoring devices on each turbine, linked to sensors at the operations and maintenance building, connected to a fault annunciation panel or supervisory control and data acquisition (SCADA) system to alert operators to potentially dangerous conditions.<br>b. The certificate holder shall maintain automatic equipment protection features in each turbine that would shut down the turbine and reduce the chance of a mechanical problem causing a fire. The certificate holder shall immediately remedy any dangerous conditions.<br>c. Submit to the Department materials or other documentation demonstrating the facility's operational safety-monitoring program and cause analysis program, for review and approval. The program shall, at a minimum, include requirements for regular turbine blade and turbine tower component inspections and maintenance, based on wind turbine manufacturer recommended frequency.<br>d. The certificate holder shall document inspection and maintenance activities including but not limited to date, turbine number, inspection type (regular or other), turbine tower and blade condition, maintenance requirements (i.e. equipment used, component repair or replacement description, impacted area location and size), and wind turbine operating status. This information shall be submitted to the Department pursuant to OAR 345-026-0080 in the facility's annual compliance report.<br>e. In the event of blade or tower failure, the certificate holder shall report the incident to the Department within 72 hours, in accordance with OAR 345-026-0170(1), and shall, within 90-days of blade or tower failure event, submit a cause analysis to the Department for its compliance evaluation.<br>[Final Order on ASC;AMD3; Public Health and Safety Standards for Wind Facilities Condition 4] |

| *STANDARD: SITING STANDARDS FOR TRANSMISSION LINES (TL) [OAR 345-024-0090]* | |
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| CON-TL-01 | During construction, the certificate holder shall take reasonable steps to reduce or manage human exposure to electromagnetic fields and submit verification to the Department, including:<br><br>a. Constructing all aboveground collector and transmission lines at least 200 feet from any residence or other occupied structure, measured from the centerline of the transmission line.<br>b. Constructing all aboveground 34.5-kV transmission lines with a minimum clearance of 25 feet from the ground.<br>c. Constructing all aboveground 230-kV transmission lines with a minimum clearance of 30 feet from the ground.<br>d. Developing and implementing a program that provides reasonable assurance that all fences, gates, cattle guards, trailers, irrigation systems, or other objects or structures of a permanent nature that could become inadvertently charged with electricity are grounded or bonded throughout the life of the line (OAR 345-025-0010(4)).<br>e. Providing to landowners a map of underground, with any applicable NESC demarking for underground facilities, and overhead transmission lines on their property and advising landowners of possible health and safety risks from induced currents caused by electric and magnetic fields.<br>f. Designing and maintaining all transmission lines so that alternating current electric fields do not exceed 9 kV per meter at one meter above the ground surface in areas accessible to the public.<br>g. Increasing the intraconnection transmission line height, shielding the electric field, or installing access barriers, if needed, to prevent induced current and nuisance shock of mobile vehicles.<br>h. Designing and maintaining all transmission lines so that induced voltages during operation are as low as reasonably achievable.<br>i. Designing, constructing and operating the transmission line in accordance with the requirements of the version of the National Electrical Safety Code that is most current at the time that final engineering of each of these components is completed (OAR 345-025-0010(4)).<br>j. Implement a safety protocol to ensure adherence to NESC grounding requirements<br>[Final Order on ASC, Siting Standard Condition 1; AMD4] |

| *STANDARD: NOISE CONTROL REGULATION (NC) [OAR 345-035-0035]* | |
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| CON-NC-01 | During construction, to reduce construction noise impacts at nearby residences, the certificate holder shall:<br>a. Establish and enforce construction site and access road speed limits;<br>b. Utilize electrically-powered equipment instead of pneumatic or internal combustion powered equipment, where feasible;<br>c. Locate material stockpiles and mobile equipment staging, parking, and maintenance areas as far as practicable away from noise sensitive properties;<br>d. Utilize noise-producing signals, including horns, whistles, alarms, and bells for safety warning purposes only;<br>e. Equip all noise-producing construction equipment and vehicles using internal combustion engines with mufflers, air-inlet silencers where appropriate, and any other shrouds, shields, or other noise-reducing features in good operating condition that meet or exceed original factory specification. Mobile or fixed "package" equipment (e.g., arc-welders, air compressors) shall be equipped with shrouds and noise control features that are readily available for that type of equipment; and,<br>f. Establish a noise complaint response system. All construction noise complaints will be logged within 48 hours of issuance. The construction supervisor shall have the responsibility and authority to receive and resolve noise complaints. A clear appeal process to the owner shall be established prior to the start of construction that will allow for resolution of noise problems that cannot be resolved by the site supervisor in a reasonable period of time. Records of noise complaints during construction must be made available to authorized representatives of the department upon request.<br>[Final Order on ASC, Noise Control Condition 1] |

### 4.5 Pre-Operational (PRO) Conditions

| Condition Number | Pre-Operational (PRO) Conditions |
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| ***STANDARD: SOIL PROTECTION (SP) [OAR 345-022-0022]*** | |
| PRO-SP-01 | Prior to beginning facility operation, the certificate holder shall provide the Department a copy of an operational SPCC plan, if required per DEQ's Hazardous Waste Program. If an SPCC plan is not required, the certificate holder shall prepare and submit to the Department for review and approval an operational Spill Prevention and Management plan. The Spill Prevention and Management Plan shall include at a minimum the following procedures and BMPs:<br>• Procedures for oil and hazardous material emergency response consistent with OAR 340, Division 100-122 and 142<br>• Procedures demonstrating compliance with all applicable local, state, and federal environmental laws and regulations for handling hazardous materials used onsite in a manner that protects public health, safety, and the environment<br>• Current inventory (type and quantity) of all hazardous materials stored onsite, specifying the amounts at each O&M building, substation and battery storage system components<br>• Restriction limiting onsite storage of diesel fuel or gasoline<br>• Requirement to store lubricating and dielectric oils in quantities equal to or greater than 55-gallons in qualified oil-filled equipment<br>• Preventative measures and procedures to avoid spills<br>o Procedures for chemical storage<br>o Procedures for chemical transfer<br>o Procedures for chemical transportation<br>o Procedures for fueling and maintenance of equipment and vehicles<br>o Employee training and education<br>• Clean-up and response procedures, in case of an accidental spill or release<br>• Proper storage procedures<br>• Reporting procedures in case of an accidental spill or release<br>[Final Order on ASC, Soil Protection Condition 5; AMD2] |
| ***STANDARD: PUBLIC SERVICES (PS) [OAR 345-022-0110]*** | |
| PRO-PS-01 | Prior to operation of the facility, the certificate holder shall ensure that operations personnel are trained and equipped for fall protection and tower rescue, including high angle and confined space rescue. Refresher training in high angle and confined space rescue must be provided to operations personnel on an annual basis throughout the operational life of the facility. The certificate holder must retain records of the training and provide them to the department upon request.<br>[Final Order on ASC, Public Services Condition 15] |
| PRO-PS-02 | Before beginning operation of the facility, the certificate holder must provide a final site plan to the identified fire protection districts and first-responders included in the Emergency Management Plan. The certificate holder must indicate on the site plan the identification number assigned to each turbine and the actual location of all facility structures. The certificate |

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| | holder shall provide an updated site plan if additional turbines or other structures are later added to the facility.<br>[Final Order on ASC, Public Services Condition 19] |
| PRO-PS-03 | Prior to operation, the certificate holder must ensure that operations personnel remain current in their first aid/CPR/AED certifications throughout the operational life of the facility. The certificate holder must retain records of the certifications and provide them to the department upon request. The certificate holder shall also ensure that an AED is available onsite at all times that operations and maintenance personnel are at the facility.<br>[Final Order on ASC, Public Services Condition 22 |

## 4.6 Operational (OPR) Conditions

| Condition Number | Operational (OPR) Conditions |
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| ***STANDARD: GENERAL STANDARD OF REVIEW (GS) [OAR 345-022-0000]*** | |
| OPR-GS-01 | The certificate holder shall submit a legal description of the site to the Oregon Department of Energy within 90 days after beginning operation of the facility. The legal description required by this rule means a description of metes and bounds or a description of the site by reference to a map and geographic data that clearly and specifically identify the outer boundaries that contain all parts of the facility.<br>[Final Order on ASC, Mandatory Condition 1] [OAR 345-025-0006(2)]] |
| ***STANDARD: SOIL PROTECTION (SP) [OAR 345-022-0022]*** | |
| OPR-SP-01 | During facility operation, the certificate holder shall:<br>a. Routinely inspect and maintain all facility components including roads, pads, and other facility components and, as necessary, maintain or repair erosion and sediment control measures and reduce potential facility contribution to erosion.<br>b. Restrict vehicles to constructed access roads, and ensure material laydown or other maintenance activities occur within graveled areas or within the maintenance area of the O&M buildings to avoid unnecessary compaction, erosion, or spill risk to the area surrounding the facility.<br>c. If in order to serve the operational needs of the energy facility, or related and supporting facilities, the certificate holder intends to substantially modify an existing road or construct a new road, the certificate holder must submit and receive Council approval of an amendment to the site certificate prior to the modification or construction.<br>[Final Order on ASC, Soil Protection Condition 6] |
| ***STANDARD: LAND USE (LU) [OAR 345-022-0030]*** | |
| OPR-LU-01 | Within one month of commencement of commercial operation, the certificate holder shall submit an as-built survey for each construction phase that demonstrates compliance with the setback requirements in Land Use Condition 1 to the department and Morrow County.<br>[Final Order on ASC, Land Use Condition 2] |
| OPR-LU-02 | During operation of the facility, the certificate holder shall restore areas that are temporarily disturbed during facility maintenance or repair activities using the same methods and monitoring procedures described in the final Revegetation Plan referenced in Fish and Wildlife Habitat Condition 11.<br>[Final Order on ASC, Land Use Condition 10] |
| OPR-LU-03 | Before beginning decommissioning activities, the certificate holder must provide a copy of the final retirement plan to Morrow County and Umatilla County.<br>[Final Order on ASC, Land Use Condition 23] |
| OPR-LU-04 | Before beginning electrical production, the certificate holder shall prepare an Operating and Facility Maintenance Plan (Plan) and submit the Plan to the department for approval in consultation with Umatilla and Morrow Counties.<br>[Final Order on ASC, Land Use Condition 25] |

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| OPR-LU-05 | Within 90 days of the commencement of electrical service from Wheatridge East, the certificate holder shall provide a summary of as-built changes to the department and Umatilla County.<br>[Final Order on ASC, Land Use Condition 26] |
| OPR-LU-06 | Prior to facility retirement, the certificate holder must include the following minimum restoration activities in the proposed final retirement plan it submits to the Council pursuant to OAR 345-027-0110 or its equivalent:<br>1. Dismantle turbines, towers, pad mounted transformers, meteorological towers and related aboveground equipment, and remove concrete pads to a depth of at least three feet below the surface grade.<br>2. Remove underground collection and communication cables that are buried less than three feet in depth and are deemed by Council to be a hazard or a source of interference with surface resource uses.<br>3. Remove gravel from areas surrounding turbine pads.<br>4. Remove and restore private access roads unless the landowners directs otherwise.<br>5. Following removal of facility components, grade disturbed areas as close as reasonably possible to the original contours and restore soils to a condition compatible with farm uses or other resources uses.<br>6. Revegetate disturbed areas in consultation with the land owner and in a manner consistent with the final Revegetation Plan referenced in Fish and Wildlife Habitat Condition 11.<br>7. If the landowner wishes to retain certain facilities, provide a letter from the land owner that identifies the roads, cleared pads, fences, gates and other improvements to be retained and a commitment from the land owner to maintain the identified facilities for farm or other purposes permitted under the applicable zone.<br>[Final Order on ASC, Land Use Condition 27] |
| ***STANDARD: RETIREMENT AND FINANCIAL ASSURANCE (RT) [OAR 345-022-0050]*** | |
| OPR-RF-01 | During facility operation, the certificate holder shall:<br>(a) Conduct monthly inspections of the battery storage systems, in accordance with manufacturer specifications. The certificate holder shall maintain documentation of inspections, including any corrective actions, and shall submit copies of inspection documentation in its annual report to the Department.<br>(b) Provide evidence in its annual report to the Department of active property coverage under its commercial business insurance from high loss-catastrophic events, including but not limited to, onsite fire or explosion.<br>[Final Order on AMD2, Retirement and Financial Assurance Condition 6] |
| ***STANDARD: PUBLIC SERVICES (PS) [OAR 345-022-0110]*** | |
| OPR-PS-01 | During operation of the facility, the certificate holder shall discharge sanitary wastewater generated at the O&M buildings to licensed on-site septic systems in compliance with State permit requirements. The certificate holder shall design each septic system for a discharge capacity of less than 2,500 gallons per day.<br>[Final Order on ASC, Public Services Condition 1] |
| OPR-PS-02 | Except as provided in this condition, during facility operation, the certificate holder shall obtain water for on-site uses from on-site wells located near the O&M buildings. The certificate holder shall construct on-site wells subject to compliance with the provisions of ORS 537.765 relating to keeping a well log. The certificate holder shall not use more than 5,000 gallons of water per day from each of the two on-site wells. The certificate holder may obtain water from other sources for on-site uses subject to prior approval by the Department. |

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| | [Final Order on ASC, Public Services Condition 2] |

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| OPR-PS-03 | (a) Prior to operation, the certificate holder shall submit to the Department for approval its Operational Waste Management Plan that includes but is not limited to the following:<br>1. Onsite handling procedure for operational replacement of damaged, defective or recalled lithium-ion batteries. The procedure shall identify applicable 49 CFR 173.185 provisions and address, at a minimum, onsite handling, packaging, interim storage, and segregation requirements.<br>2. Training employees to handle, replace, and store damaged, defective or recalled lithium-ion batteries; minimize and recycle solid waste.<br>3. Recycling paper products, metals, glass, and plastics.<br>4. Recycling used oil and hydraulic fluid.<br>5. Collecting non-recyclable waste for transport to a local landfill by a licensed waste hauler or by using facility equipment and personnel to haul the waste. Waste hauling by facility personnel within Morrow County shall be performed in compliance with the Morrow County Solid Waste Management Ordinance, Section 5.000 Public Responsibilities, 5.010 Transportation of Solid Waste and 5.030 Responsibility for Propose Disposal of Hazardous Waste which requires that all loads be covered and secured and that operators be responsible for hazardous waste disposal in accordance with applicable regulatory requirements.<br>6. Segregating all hazardous and universal, non-recyclable wastes such as used oil, oily rags and oil-absorbent materials, mercury-containing lights, lithium-ion batteries, lead-acid and nickel-cadmium batteries, and replaced, damaged, defective or recalled lithium-ion batteries for disposal by a licensed firm specializing in the proper recycling or disposal of hazardous and universal wastes.<br>(b) During operation, the certificate holder shall implement the approved Operational Waste Management Plan.<br>[Final Order on ASC, Public Services Condition 4; AMD2] |
| OPR-PS-04 | During operation, the certificate holder shall ensure that appropriate law enforcement agency personnel have an up-to-date list of the names and telephone numbers of facility personnel available to respond on a 24-hour basis in case of an emergency at the facility site.<br>[Final Order on ASC, Public Services Condition 12] |
| ***STANDARD: PUBLIC HEALTH AND SAFETY FOR WIND FACILITIES (WF) [OAR 345-024-0010]*** | |
| OPR-WF-01 | During operation, the certificate holder shall ensure each facility substation and battery storage systems are enclosed with appropriate fencing and locked gates to protect the public from electrical hazards.<br>[Final Order on ASC, Public Health and Safety Standards for Wind Facilities Condition 2; AMD2] |

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| ***STANDARD: SITING STANDARDS FOR TRANSMISSION LINES (TL) [OAR 345-024-0090]*** | |
| OPR-TL-01 | During operation, the certificate holder shall:<br>(1) Update the OPUC Safety Staff as to how the operator will comply with OAR Chapter 860, Division 024 on an ongoing basis considering future operations, maintenance, emergency response, and alterations until facility retirement.<br>(2) File the following required information with the Commission:<br>a. 758.013 Operator of electric power line to provide Public Utility Commission with safety information; availability of information to public utilities. (1) Each person who is subject to the Public Utility Commission's authority under ORS 757.035 and who engages in the operation of an electric power line as described in ORS 757.035 must provide the commission with the following information before January 2 of each even-numbered year:<br>i. The name and contact information of the person that is responsible for the operation and maintenance of the electric power line, and for ensuring that the electric power line is safe, on an ongoing basis; and<br>ii. The name and contact information of the person who is responsible for responding to conditions that present an imminent threat to the safety of employees, customers and the public.<br>iii. In the event that the contact information described in subsection (1) of this section changes or that ownership of the electric power line changes, the person who engages in the operation of the electric power line must notify the commission of the change as soon as practicable, but no later than within 90 days.<br>iv. If the person described in subsection (1) of this section is not the public utility, as defined in ORS 757.005, in whose service territory the electric power line is located, the commission shall make the information provided to the commission under subsection (1) of this section available to the public utility in whose service territory the electric power line is located. [2013 c.235 §3]<br>(3) Provide OPUC Safety Staff with:<br>a. Maps and Drawings of routes and installation of electrical supply lines showing:<br>• Transmission lines and structures (over 50,000 Volts)<br>• Distribution lines and structures - differentiating underground and overhead lines (over 600 Volts to 50,000 Volts)<br>• Substations, roads and highways<br>• Plan and profile drawings of the transmission lines (and name and contact information of responsible professional engineer).<br>[Final Order on ASC, Siting Standard Condition 3] |
| ***STANDARD: NOISE CONTROL REGULATION (NC) [OAR 345-035-0035]*** | |
| OPR-NC-01 | During operation of the facility, if required to meet the maximum allowable decibel threshold of 50 dBA, the certificate holder shall only operate the facility in the NRO mode that is identified prior to construction pursuant to Noise Control Condition 2. After beginning operation of the facility, the certificate holder shall include a certification in its annual Compliance Report that the NRO mode turbines identified in the preconstruction analysis required by Noise Control Condition 2 are operating at or below the identified dBA reduction level.<br>[Final Order on ASC, Noise Control Condition 3] |

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| OPR-NC-02 | During operation, the certificate holder shall maintain a complaint response system to address noise complaints. The certificate holder shall notify the department within two working days of receiving a noise complaint related to the facility. The notification should include, but is not limited to, the date the certificate holder received the complaint, the nature of the complaint, the complainant's contact information, the location of the affected property, and any actions taken, or planned to be taken, by the certificate holder to address the complaint.<br>[Final Order on ASC, Noise Control Condition 4] |
| OPR-NC-03 | During operation, in response to a complaint from the owner of a noise sensitive property regarding noise levels from the facility, the Council may require the certificate holder to monitor and record the statistical noise levels to verify that the certificate holder is operating in compliance with the noise control regulations. The monitoring plan must be reviewed and approved by the department prior to implementation. The cost of such monitoring, if required, shall be borne by the certificate holder.<br>[Final Order Noise Control Condition 5] |

## 4.7 Retirement Conditions (RET)

| Condition Number | Retirement (RET) Conditions |
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| ***STANDARD: RETIREMENT AND FINANCIAL ASSURANCE (RT) [OAR 345-022-0050]*** | |
| RET-RF-01 | The certificate holder must retire the facility in accordance with a retirement plan approved by the Council if the certificate holder permanently ceases construction or operation of the facility. The retirement plan must describe the activities necessary to restore the site to a useful, nonhazardous condition, as described in OAR 345-027-0110(5). After Council approval of the plan, the certificate holder must obtain the necessary authorization from the appropriate regulatory agencies to proceed with restoration of the site.<br>[Final Order Retirement and Financial Assurance Condition 2]<br>[Mandatory Condition OAR 345-025-0006(9)] |
| RET-RF-02 | If the Council finds that the certificate holder has permanently ceased construction or operation of the facility without retiring the facility according to a final retirement plan approved by the Council, as described in OAR 345-027-0110, the Council must notify the certificate holder and request that the certificate holder submit a proposed final retirement plan to the department within a reasonable time not to exceed 90 days. If the certificate holder does not submit a proposed final retirement plan by the specified date, the Council may direct the department to prepare a proposed final retirement plan for the Council's approval.<br>Upon the Council's approval of the final retirement plan, the Council may draw on the bond or letter of credit described in section (8) to restore the site to a useful, nonhazardous condition according to the final retirement plan, in addition to any penalties the Council may impose under OAR Chapter 345, Division 29. If the amount of the bond or letter of credit is insufficient to pay the actual cost of retirement, the certificate holder must pay any additional cost necessary to restore the site to a useful, nonhazardous condition. After completion of site restoration, the Council must issue an order to terminate the site certificate if the Council finds that the facility has been retired according to the approved final retirement plan.<br>[Final Order Retirement and Financial Assurance Condition 3]<br>[Mandatory Condition OAR 345-025-0006(16)] |

## 5.0 Successors and Assigns

To transfer this site certificate or any portion thereof or to assign or dispose of it in any other manner, directly or indirectly, the certificate holder shall comply with OAR 345-027-0100.

## 6.0 Severability and Construction

If any provision of this agreement and certificate is declared by a court to be illegal or in conflict with any law, the validity of the remaining terms and conditions shall not be affected, and the rights and obligations of the parties shall be construed and enforced as if the agreement and certificate did not contain the particular provision held to be invalid.

## 7.0 Execution

This site certificate may be executed in counterparts and will become effective upon signature by the Chair of the Energy Facility Siting Council and the authorized representative of the certificate holder.

**IN WITNESS THEREOF**, this site certificate has been executed by the State of Oregon, acting by and through the Energy Facility Siting Council, and by Wheatridge Wind II ~~Energy~~, LLC.

**ENERGY FACILITY SITING COUNCIL**

By: _____

Hanley Jenkins, II, Chair

Oregon Energy Facility Siting Council

Date: _____

**WHEATRIDGE WIND II ~~ENERGY~~, LLC**

By: _____

Matthew Handel, Vice President Development, NextEra Energy Resources, LLC on behalf of Wheatridge Wind II ~~Energy~~, LLC

Date:_____

# Attachment A
# ~~Wind~~ Facility ~~and Solar Facility~~ Site Boundary Map~~s~~
# (~~ASC Exhibit C, Figure C-2 and RFA4~~RFA5, Figure 1.2)

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# Attachment 3. Common Facilities Agreement Documentation (Confidential)

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# Attachment 4. Retirement Cost Estimate

# Wheatridge 2.5 (40 turbines)

## COST ESTIMATE FOR FACILITY SITE RESTORATION

(Unit Costs in 2nd Quarter 2010 Dollars)

**Adjustment Factor:** 1.148853 **Current Quarter:** **Q3 2018**

GDP Index 2nd Quarter 2010: **100.981**

GDP Index Current Quarter: **116.0123**

https://www.oregon.gov/das/OEA/Pages/forecastecor

| Cost Estimate Component | Quantity | Unit Cost | Extension |
|---|---|---|---|
| **Turbines** | | | |
| - Disconnect electrical, ready for disassembly (per turbine) | 40 | $235 | $9,400 |
| - Remove turbine blades, hubs and nacelles (per turbine) | 40 | $5,900 | $236,000 |
| - Remove turbine towers (per ton of steel) | 13,064 | $82 | $1,071,248 |
| - Remove turbine foundations (per cubic yard) | 1,132 | $52 | $58,864 |
| - Remove pad transformers and foundation (per turbine) | 40 | $2,538 | $101,520 |
| - Restore turbine site including spur road (per turbine) | 40 | $1,138 | $45,520 |
| **Met Towers** | | | |
| - Dismantle and dispose of met towers (per tower) | 1 | $10,393 | $10,393 |
| **O&M Facilities** | | | |
| - Dismantle and dispose of O&M facilities (per unit) | 0 | $61,238 | $0 |
| **Substations** | | | |
| - Dismantle and dispose of substations (per unit) | 0.3333 | $187,491 | $62,491 |
| **Transmission Lines** | | | |
| ***To be owned by a local co-op U.E.C. (removal not required)** | | | |
| **Access Roads** | | | |
| - Road removal, grading and seeding (per mile) | **12** | $23,555 | $282,660 |
| **Restore Additional Areas Disturbed by Facility Removal** | | | |
| - Grading and seeding around access roads, met towers, O&M facilities and turbine turnouts (per acre) | **43.3175** | $8,706 | $377,122 |
| - Seeding around collector line structures, transmission lines, crane paths and temporary laydown areas (per acre) | **0** | $3,398 | $0 |
| **General Costs** | | | |
| - Permits, mobilization, engineering, overhead | 0.3333 | $454,238 | $151,398 |
| **Subtotal** | | | **$2,406,615** |
| **Subtotal Adjusted to Current Dollars** **Q3 2018** | | | **$2,764,847** |
| Performance Bond @ 1% | | | $27,648 |
| **Gross Cost (Adjusted)** | | | **$2,792,495** |
| Administration and Project Management @ 10% | | | $279,250 |
| Future Developments Contingency @ 10% | | | $279,250 |
| **Total Site Restoration Cost (current dollars)** | | | **$3,350,994** |
| **Total Site Restoration Cost (rounded to nearest $1,000)** | | | **$3,351,000** |

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# Attachment 5. Scotiabank Letter of Credit Commitment Letter

Scotiabank

**LETTER OF CREDIT COMMITMENT LETTER**

Portland General Electric Company
121 SW Salmon Street
3 World Trade Center - 0306
Portland, Oregon 97204
Attn: Credit Dept.

August 23, 2018

Dear Sirs or Madams:

NextEra Capital Holdings Inc. ("Bidder"), acting on behalf of Wheatridge Wind Energy, LLC, plans to submit a bid in response to the Portland General Electric Company's 2018 Renewable Resources Request For Proposals ("RFP"). The Bank of Nova Scotia (the "Bank") promises that, should any bid submitted by Bidder in the RFP be selected for negotiations, the Bank will issue an irrevocable standby letter of credit (the "Letter of Credit") in a form reasonably acceptable to you up to a maximum amount of $60,000,000.

The Bank's commitment hereunder is subject to (i) documentation having terms and conditions taken as a whole no less favorable than those set forth in the Amended & Restated Corporate Revolving Credit Agreement dated as of February 8, 2013, as amended and (ii) non-occurrence of a material adverse change affecting general market conditions or the Bidder's financial condition.

The Bank shall not be under any obligation to issue any Letter of Credit if: (A) any order, judgment or decree of any governmental authority or arbitrator shall by its terms purport to enjoin or restrain the Bank from issuing the Letter of Credit, or any law or regulation applicable to the Bank or any request or directive (whether or not having the force of law) from any governmental authority with jurisdiction over the Bank shall prohibit, or request that the Bank refrain from, the issuance of letters of credit generally or the Letter of Credit in particular or shall impose upon the Bank with respect to the Letter of Credit any restriction, reserve or capital requirement (for which the Bank is not otherwise compensated) not in effect on the closing date, or shall impose upon the Bank any unreimbursed loss, cost or expense which was not applicable on the closing date and which the Bank in good faith deems material to it; and (B) the issuance of the Letter of Credit would violate one or more policies of the L/C Issuer applicable to letters of credit generally.

The Bank's commitment hereunder will terminate on December 31, 2020.

We understand that said letter of credit is a required element in evaluating the Bidder's bid and that the execution and delivery of the letter of credit is a condition precedent to you entering into an agreement with Bidder. We also understand that you are under no obligation to enter into any agreement with Bidder, under the RFP or otherwise.

*[Remainder of page intentionally left blank]*

Yours truly,
The Bank of Nova Scotia

By:_____
Print: David Dewar
Title: Director

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# Attachment 6. Mitigation Plans

# Wheatridge Renewable Energy Facility I and Wheatridge Renewable Energy Facility II

# Habitat Mitigation Plan

**Prepared for**
**Wheatridge Wind Energy, LLC**
and
**Wheatridge Wind II, LLC**

**Prepared by:**


**Tetra Tech, Inc.**

**April 2020**
**Effective Date:** Wheatridge Renewable Energy Facility I and II Site Certificate Effective Dates

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# 1.0 Introduction

This Habitat Mitigation Plan (HMP) has been prepared for the Wheatridge Renewable Energy Facility I (WREFI), a 100-megawatt (MW) wind energy facility, and the Wheatridge Renewable Energy Facility II (WREFII) West, a 200-MW wind energy facility. Both WREFI and WREFII West are in Morrow County. The two facilities were originally permitted as part of a larger facility, the Wheatridge Wind Energy Facility (WWEF). WWEF was granted approval of a site certificate by the Oregon Department of Energy's (ODOE) Energy Facility Siting Council (EFSC) on April 28, 2017 (EFSC 2017a), consisting of facilities in north Morrow (Wheatridge West) and Umatilla (Wheatridge East) counties[1]. Wheatridge West began construction in January 2020.

Prior to operation, but after construction had commenced, WWEF was split into WREFI and WREFII. The site certificate for WREFI is held by Wheatridge Wind Energy, LLC and the site certificate for WREFII is held by Wheatridge Wind II, LLC (collectively, the certificate holders). WREFI is within the Wheatridge West portion of the WWEF. WREF II is a 400-MW wind energy and 150-MW solar energy and battery storage facility within Wheatridge West and Wheatridge East. Of the 400 MW of wind energy in WREFII, 200 MW is located within Wheatridge West and is referred to as WREFII West in this HMP. This HMP reflects the HMP prepared and amended for Wheatridge West as part of pre-construction compliance in coordination with ODOE and Oregon Department of Fish and Wildlife (ODFW). This HMP fulfills the mitigation responsibility for WREFI; the certificate holder for WREFII will amend this HMP or prepare separate HMPs for the remaining portions of WREFII prior to construction of those facilities.

Facility components associated with WREFI and WREFII West include the following related or supporting facilities:

- Electrical collection system;
- One collector substation;
- Permanent meteorological (met) towers;
- Communication and Supervisory Control and Data Acquisition (SCADA) System;
- One operations and maintenance (O&M) building;
- New or improved access roads; and
- Additional temporary construction areas (including staging areas and one or more temporary concrete batch plant areas).

This HMP provides documentation that construction and operation of WREFI and WREFII West are in compliance with EFSC's Fish and Wildlife Habitat standard in Oregon Administrative Rule (OAR)

[1] The site certificate for the WWEF was amended five times, including the addition of solar energy generation and battery storage components and splitting the facility into WREFI and WREFII (EFSC 2017b, EFSC 2018a, EFSC 2018b, EFSC 2019).

345-022-0060, which implements ODFW Fish and Wildlife Habitat Mitigation Policy, OAR 635-415-0000 through 0025. The certificate holders' goal is to reduce and eliminate the effects on wildlife and habitat from construction and operation by implementing this HMP along with their respective revegetation plans, noxious weed control plans, and wildlife monitoring and mitigation plans.

# 2.0 Pre-Construction Compliance

This HMP for WREFI and WREFII West will show compliance with the WWEF Site Certificate condition PRE-FW-01 and PRE-FW-4, which read:

> ***PRE-FW-01*** *Prior to final site design and facility layout, the certificate holder shall conduct a field-based habitat survey to confirm the habitat categories of all areas that will be affected by facility components, as well as the locations of any sensitive resources such as active raptor and other bird nests. The survey shall be planned in consultation with the department and ODFW, and survey protocols shall be confirmed with the department and ODFW. Following completion of the field survey, and final layout design and engineering, the certificate holder shall provide the department and ODFW a report containing the results of the survey, showing expected final location of all facility components, the habitat categories of all areas that will be affected by facility components, and the locations of any sensitive resources.*
>
> *The report shall also include an updated version of Table FW-1 Potential Temporary and Permanent Impacts by Habitat Category and Type of the final order, showing the acres of expected temporary and permanent impacts to each habitat category, type, and sub-type. The preconstruction survey shall be used to complete final design, facility layout, and micrositing of facility components. As part of the report, the certificate holder shall include its impact assessment methodology and calculations, including assumed temporary and permanent impact acreage for each transmission structure, wind turbine, access road, and all other facility components. If construction laydown yards are to be retained post construction, due to a landowner request or otherwise, the construction laydown yards must be calculated as permanent impacts, not temporary. In classifying the affected habitat into habitat categories, the certificate holder shall consult with the department and ODFW. The certificate holder shall not begin construction of the facility until the habitat assessment, categorization, and impact assessment has been approved by the department, in consultation with ODFW. The certificate holder shall not construct any facility components within areas of Category 1 habitat and shall avoid temporary disturbance of Category 1 habitat.*
>
> ***PRE-FW-04*** *Before beginning construction the certificate holder shall prepare and receive approval from the department of a final Habitat Mitigation Plan. The final Habitat Mitigation Plan shall be based on the final facility design and shall be approved by the department in consultation with ODFW. The Council retains the authority to approve, reject or modify the final HMP.*
>
> *a. The final Habitat Mitigation Plan and the department's approval must be received prior to beginning construction. The department shall consult with ODFW on the final*

*plan. The certificate holder shall implement the requirements of the approved plan during all phases of construction and operation of the facility.*

b. *The certificate holder shall calculate the size of the habitat mitigation area according to the final design configuration of the facility and the estimated areas of habitat affected in each habitat category, in consultation with the department, as per the pre-construction survey results and impact assessment calculations called for in Fish and Wildlife Condition 1.*

c. *The certificate holder shall acquire the legal right to create, enhance, maintain, and protect the habitat mitigation area, as long as the site certificate is in effect, by means of an outright purchase, conservation easement or similar conveyance and shall provide a copy of the documentation to the department prior to the start of construction. Within the habitat mitigation area, the certificate holder shall improve the habitat quality as described in the final Habitat Mitigation Plan.*

d. *The certificate holder shall provide a habitat assessment of the habitat mitigation area, based on a protocol approved by the Department in consultation with ODFW, which includes methodology, habitat map and available acres by habitat category and subtype in tabular format.*

e. *The final HMP shall include an implementation schedule for all mitigation actions, including securing the conservation easement, conducting the ecological uplift actions at the habitat mitigation area, revegetation and restoration of temporarily impacted areas, and monitoring. The mitigation actions shall be implemented according to the following schedule, as included in the HMP:*

    i. *Restoration and revegetation of temporary construction-related impact area shall be conducted as soon as possible following construction.*

    ii. *The certificate holder shall obtain legal authority to conduct the required mitigation work at the compensatory habitat mitigation site before commencing construction. The habitat enhancement actions at the compensatory habitat mitigation site shall be implemented concurrent with construction.*

f. *The final HMP shall include a monitoring and reporting program for evaluating the effectiveness of all mitigation actions, including restoration of temporarily impacted areas and ecological uplift actions at the habitat mitigation area.*

g. *The final HMP shall include mitigation in compliance with the Council's Fish and Wildlife Habitat standard, including mitigation for temporary impacts to Category 4 habitat (shrub-steppe habitat); and, mitigation for all Category 2 habitat impacts that meet the mitigation goal of no net loss of habitat quality or quantity, plus a net benefit of habitat quality or quantity.*

*h. The final HMP may be amended from time to time by agreement of the certificate holder and the Oregon Energy Facility Siting Council ("Council"). Such amendments may be made without amendment of the site certificate. The Council authorizes the Department to agree to amendments to this plan. The Department shall notify the Council of all amendments, and the Council retains the authority to approve, reject, or modify any amendment of this plan agreed to by the Department.*

# 3.0 Habitat Categories and Habitat Types

In compliance with Condition PRE-FW-01, a pre-construction habitat survey was conducted in 2019 to verify habitat subtypes and habitat categories of all areas to be affected by WREFI and WREFII West. This survey was planned in consultation with ODFW and a protocol was reviewed and approved by ODFW (Appendix A). Pre-construction surveys for Washington ground squirrels, rare plants, raptor nests, and special-status species were also conducted in 2019 in compliance with Condition PRE-FW-01 for identification of sensitive resources and other conditions specific to the implementation of Washington ground squirrel and rare plant surveys.

The ODFW Fish and Wildlife Habitat Mitigation Policy provides a framework to categorize habitats based on type, quality, availability, and usefulness/importance to wildlife, and establishes mitigation goals and implementation standards for each. Table 1 defines each of the six habitat category types as presented in the ODFW Habitat Mitigation Policy.

**Table 1. Habitat Categorization Types**

| Category Type | Definition[1] | Mitigation Goal |
|---|---|---|
| 1 | Irreplaceable, essential habitat for a fish or wildlife species, population, or a unique assemblage of species and is limited on either a physiographic province or site-specific basis, depending on the individual species, population or unique assemblage. | The mitigation goal for Category 1 habitat is no loss of either habitat quantity or quality. |
| 2 | Essential habitat for a fish or wildlife species, population, or unique assemblage of species and is limited either on a physiographic province or site-specific basis depending on the individual species, population or unique assemblage. | The mitigation goal if impacts are unavoidable is no net loss of either habitat quantity or quality and to provide a net benefit of habitat quantity or quality. |
| 3 | Essential habitat for fish and wildlife, or important habitat for fish and wildlife that is limited either on a physiographic province or site-specific basis, depending on the individual species or population. | The mitigation goal is no net loss of either habitat quantity or quality. |
| 4 | Important habitat for fish and wildlife species. | The mitigation goal is no net loss of either habitat quantity or quality. |
| 5 | Habitat for fish and wildlife having high potential to become either essential or important habitat. | The mitigation goal, if impacts are unavoidable, is to provide a net benefit in habitat quantity or quality. |

| Category Type | Definition[1] | Mitigation Goal |
|---|---|---|
| 6 | Habitat that has low potential to become essential or important habitat for fish and wildlife. | The mitigation goal is to minimize impacts. |
| 1. Source: OAR 635-415-0025. | | |

For WREFI and WREFII West, Category 1 habitat could include suitable habitat within 785 feet of documented Washington ground squirrel (*Urocitellus washingtoni*) colonies. Category 2 habitat could be associated with ODFW mule deer winter range (ODFW 2012), areas of potential Washington ground squirrel use, and high-quality native habitat. Areas of potential ground squirrel use are defined as being suitable habitat within 4,921 feet of Washington ground squirrel colonies, but not occupied by any squirrels either for burrowing or foraging. Category 3, 4, and 6 habitats could include areas that do not function as mule deer winter range and do not contain Washington ground squirrel colonies or areas of potential use. Category 5 has not been identified and does not occur in WREFI and WREFII West. Habitat types include grassland, shrub-steppe, and developed. Each of these habitat types contain habitat subtypes that were used to map habitat in the WREFI and WREFII site boundaries. Table 2 is a habitat categorization matrix that defines the habitat subtypes and the corresponding habitat categories in which each habitat subtype may fall based on proximity to wildlife resources and/or vegetation composition.

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**Table 2. WREFI and WREFII West Habitat Categorization Matrix**

| Habitat type | Habitat Subtype | Category 1 | Category 2 | Category 3 | Category 4 | Category 5 | Category 6 |
|---|---|---|---|---|---|---|---|
| Grassland | Exotic Annual Grassland | Active Washington ground squirrel colony with a 785-foot buffer (area required for squirrel survival) in suitable habitat. | Additional 4,921 foot (1.5km) buffer (area of potential WAGS use) of WAGS Category 1 habitat except where there are habitat barriers to dispersal.<br><br>OR<br><br>Overlaps with ODFW mule deer winter range. | – | Non-native grasslands with a very high weed component and disturbed or less nutrient-rich soils. The forb component is composed primarily of non-native weeds, such as cheatgrass, bulbous bluegrass, cereal rye, tumblemustard, and Russian thistle, with occasional patches of native bunchgrass, primarily Sandberg bluegrass. The high weed content is primarily due to past fires, which burned native shrubs and bunchgrasses and were followed by heavy grazing and/or wind erosion.<br><br>Some of these sites support long-billed curlew. Category 4 Exotic Annual Grassland provides important habitat to common species like horned lark, but the dense weed cover and lack of native grasses limit the ability of most wildlife species to use these areas for forage or cover. In addition, the weed cover, often dominated by annuals such as cheatgrass, makes the slopes in this area more susceptible to erosion and soil damage from grazing, because of a lack of the robust root structure found in perennial species, such as the native bunchgrasses. With sufficient time and appropriate livestock grazing practices, however, these areas could become suitable habitat for some native wildlife species. This habitat is commonly found throughout the Columbia Basin. | – | – |
| | Native Grassland | Active Washington ground squirrel colony with a 785-foot buffer (area required for squirrel survival) in suitable habitat. | Additional 4,921 foot (1.5km) buffer (area of potential WAGS use) of WAGS Category 1 habitat except where there are habitat barriers to dispersal.<br><br>OR<br><br>Overlaps with ODFW mule deer winter range. | Dominated by native perennial grasses such as Sandberg bluegrass, bluebunch wheatgrass, Idaho fescue, western needlegrass, and needle-and-thread grass. Various native forbs and low shrubs such as gray rabbitbrush and, to a lesser extent, green rabbitbrush are present but are an inconspicuous component. Native vascular plants are diverse and a variety of invertebrates can be found utilizing the plants throughout the growing season. These habitats have been altered through land use or wildfires, and generally contain a significant component of non-native vegetation (broad-leaf weeds and annual grasses). Category 3 Native Perennial Grasslands generally occur on sites with shallow soils and harsh exposures, or in areas that have experienced livestock grazing or frequent fires. Provide essential foraging habitat to a variety of common resident and migratory birds and common mammals. State Sensitive species that occur in this habitat include white-tailed jackrabbit, long-billed curlew, burrowing owl, and grasshopper sparrow. Native grasses and forbs provide forage for mule deer. | Category 4 Native Perennial Grassland is ecologically similar to Category 3 Native Perennial Grassland but is classified as Category 4 because its small size and isolated nature limit its value to wildlife. | – | – |

| Habitat type | Habitat Subtype | Category 1 | Category 2 | Category 3 | Category 4 | Category 5 | Category 6 |
|---|---|---|---|---|---|---|---|
| Shrub-steppe | Basin Big Sagebrush Shrub-steppe | Active Washington ground squirrel colony with a 785-foot buffer (area required for squirrel survival) in suitable habitat. | Additional 4,921-foot (1.5km) buffer (area of potential WAGS use) of WAGS Category 1 habitat except where there are habitat barriers to dispersal.<br><br>OR<br><br>Overlaps with ODFW mule deer winter range.<br><br>OR<br><br>Shrub-steppe habitat with an overstory of mature (large structure) patches of basin big sagebrush. Understory plants consist of a mix of native bunchgrasses and exotic annual grasses depending largely on level of impact from disturbance. Common grasses are Sandberg bluegrass, bluebunch wheatgrass, cheatgrass, and bulbous bluegrass. Category 2 Basin Big Sagebrush Shrub-steppe has a higher shrub density and greater plant health than similar but lesser quality Category 3 Basin Big Sagebrush Shrub-steppe habitat. Category 2 Basin Big Sagebrush Shrub-steppe offers high quality breeding habitat for shrub obligate species including loggerhead shrike and may support Washington ground squirrel and white-tailed jackrabbit. Sagebrush lizard may be found in areas where more sandy soils are present. | Patches of Category 3 Basin Big Sagebrush Shrub-steppe lack the density and plant health of Category 2 Basin Big Sagebrush Shrub-steppe or are in patches of limited size. The overstory sagebrush in this type is often decadent or lacks full foliage. Understory vegetation in Category 3 Basin Big Sagebrush Shrub-steppe often tends toward annual grasses and low weeds. These areas were historically higher quality habitats but are experiencing degradation due to land use practices or frequent fires. However, the mature shrub cover provides escape and resting cover for common wildlife and is limited in the immediate area and the region. | – | – | – |
| | Rabbitbrush/ Snakeweed Shrub-steppe | Active Washington ground squirrel colony with a 785-foot buffer (area required for squirrel survival) in suitable habitat. | Additional 4,921-foot (1.5km) buffer (area of potential WAGS use) of WAGS Category 1 habitat except where there are habitat barriers to dispersal.<br><br>OR<br><br>Overlaps with ODFW mule deer winter range. | Have been affected by recent fires and are in a relatively early seral stage. Native rabbitbrush and other low-stature plants such as broom snakeweed and various buckwheat species are common. The understory is native Sandberg bluegrass, non-native cheatgrass, bulbous bluegrass, and tumblemustard. Patches of native perennial grasses, such as bluebunch wheatgrass and needle-and-thread grass, are present. Many of these sites contain small patches of sagebrush that are less than one acre (0.4 ha) in size. Category 3 Rabbitbrush/Snakeweed Shrub-steppe provides foraging, cover, and/or nesting habitat for white-tailed jackrabbit and grasshopper sparrow. | Has the same plant species but differs in composition from Category 3 Rabbitbrush/Snakeweed Shrub-steppe in that it has a greater weed and annual grass component than Category 3 Rabbitbrush/Snakeweed Shrub-steppe. While aspect and soils may contribute somewhat to this, disturbances such as livestock grazing and fires likely have a far greater effect. | – | – |

| Habitat type | Habitat Subtype | Category 1 | Category 2 | Category 3 | Category 4 | Category 5 | Category 6 |
|---|---|---|---|---|---|---|---|
| Developed | Revegetated or Other Planted Grasslands | Active Washington ground squirrel colony with a 785-foot buffer (area required for squirrel survival) in suitable habitat. | Additional 4,921-foot (1.5km) buffer (area of potential WAGS use) of WAGS Category 1 habitat except where there are habitat barriers to dispersal.<br><br>OR<br><br>Overlaps with ODFW mule deer winter range. | Planted grasslands on previously farmed or other disturbed lands that may be enrolled in the Conservation Reserve Program. This habitat subtype is comprised mainly of native or native-like grasses. Native vegetation in Category 3 Revegetated or Other Planted Grasslands may be sparse and not well-developed and may have a significant component of annual grasses and weeds. This habitat supports state Sensitive species such as grasshopper sparrow and white-tailed jackrabbit. | – | – | – |
| | Dryland Wheat | – | – | – | – | – | Agricultural fields that are currently in small grain production or fallow. |
| | Other | – | – | – | – | – | Includes farming/ranching home and shop sites, corrals, structures, feedlots, active and inactive gravel quarries, non-irrigated pastures, graveled and paved roads, rights-of-way, and waste areas associated with on-going human activities. |

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# 4.0 Micrositing

Sensitive resources were avoided during development of the site boundary based on baseline surveys performed in support of the Application for Site Certificate (ASC; Wheatridge Wind Energy 2015). Pre-construction surveys performed in 2019 have informed constraints mapping used during micrositing within the approved site boundary.

Washington ground squirrel colonies were identified during surveys performed between 2011 and 2013 in support of Exhibits P and Q of the ASC (Wheatridge Wind Energy 2015). The approved site boundary avoided these colonies and their associated Category 1 habitat. No Washington ground squirrels were detected during 2019 preconstruction surveys (Tetra Tech 2019a). Washington ground squirrels identified in croplands do not require micrositing or mitigation, as cropland is not important or essential habitat for the species.

Similar to Washington ground squirrel colonies, raptor nest locations (specifically ferruginous hawks and golden eagles) were avoided during initial siting of facilities for the ASC (Wheatridge Wind Energy 2015). The 2019 pre-construction raptor nest surveys identified 34 active nests within 2 miles of the site boundary (NWC 2019). Of those, nine nests of state sensitive raptors are within 0.25 miles of the site boundary. Condition CON-FW-02 stipulates that no ground-disturbing activity should occur within 0.25 miles of state sensitive raptor nests during seasonal restrictions. Table 3 provides information on the nest, the seasonal restriction, and the approach to avoid impacts to the nest during construction (if nest were to be active in 2020). The nest locations are included in Figure 1 and Figure 2.

**Table 3. 2019 State Sensitive Raptor Nests within 0.25 Miles of the Site Boundary**

| Nest ID | Species[1] | Nest Buffer Restriction | Mule Deer Winter Range Restriction | Resolution |
|---|---|---|---|---|
| 3770 | FEHA | March 15 – August 15 | December 1 – March 31 | While the nest buffer intersects the site boundary, there are no ground disturbing activities proposed within the nest buffer. All components were removed from nest buffer during micrositing. |
| 4688 | SWHA | April 1 – August 15 | NA | This nest is located in a tree at a residence near the intersection of HWY 207/Bombing Range Rd/Strawberry Ln, which will be used for delivery of components. No ground disturbing activities will occur within the nest buffer. |
| 4689 | SWHA | April 1 – August 15 | NA | While the nest buffer intersects the site boundary, there are no ground disturbing activities proposed within the nest buffer. All components were removed from nest buffer during micrositing. |
| 5001 & 5002 | BUOW | April 1 – August 15 | NA | The 0.25-mile buffer extends across Bombing Range Rd to the east of the burrows. Approximately 475 feet of an access road occurs within the nest buffer; however, the access road is on the opposite side of |

| Nest ID | Species[1] | Nest Buffer Restriction | Mule Deer Winter Range Restriction | Resolution |
|---|---|---|---|---|
| | | | | Bombing Range Rd from the burrows. The level of activity associated with Bombing Range Rd effectively negates the need to extend seasonal restrictions across the road. Construction of the access road will be completed prior to April 1. |
| 1727 | SWHA | April 1 – August 15 | NA | Ground disturbing activities within the nest buffer will occur outside of the nest buffer seasonal restriction to the extent possible. If work must occur within the active nest buffer during the seasonal restriction, a plan will be prepared in coordination with ODFW to ensure compliance with condition CON-FW-02. If necessary, an exception request to condition CON-FW-02 will be submitted. Some construction traffic may use the road within the nest buffer during the seasonal restriction. |
| 4692 | SWHA | April 1 – August 15 | NA | Construction of the collector line will occur within the nest buffer but outside of the nest buffer seasonal restriction to the extent possible. If work must occur within the active nest buffer during the seasonal restriction, a plan will be prepared in coordination with ODFW to ensure compliance with condition CON-FW-02. If necessary, an exception request to condition CON-FW-02 will be submitted. |
| 3789 | SWHA | April 1 – August 15 | December 1 – March 31 | Turbine, collection, and roads are within the nest buffer. Construction will be completed prior to April 1. Work in this area will occur within the mule deer winter range restriction. An exception request to perform work in mule deer winter range during the winter range restriction has been approved. |
| 4685 | SWHA | April 1 – August 15 | December 1 – March 31 | While the nest buffer intersects the site boundary, there are no ground disturbing activities proposed within the nest buffer. All components were removed from nest buffer during micrositing. |
| 4696 | FEHA | March 15 – August 15 | December 1 – March 31 | While the nest buffer intersects the site boundary, there are no ground disturbing activities proposed within the nest buffer. All components were removed from nest buffer during micrositing. |
| 1. BUOW = Burrowing Owl; FEHA = Ferruginous Hawk; SWHA = Swainson's Hawk. | | | | |

Condition CON-FW-01 states that no construction shall occur in mule deer winter range during winter, defined as December 1 to March 31. In order to avoid ground disturbing activities within a raptor nest buffer (Nest ID 3789; Table 3) during the nesting period, work must be performed near Turbine 111 during the mule deer winter restriction period. This includes constructing approximately 1,500 feet of access road; blasting, excavating, and pouring a concrete turbine

foundation; erecting the turbine; and trenching collection lines. This would occur in revegetated grassland and dryland wheat habitat. An exception request to condition CON-FW-01 to perform this work, including a plan to avoid, minimize, and mitigate for impacts on mule deer winter range during the seasonal restriction was approved.

Condition PRE-TE-03 states that the certificate holders will avoid ground disturbance where Laurent's milkvetch (*Astragalus collinus* var. *laurentii*) occurs. Pre-construction surveys identified this plant within the site boundary (Tetra Tech 2019b). An exception request to condition PRE-TE-03 was approved to perform work in habitat occupied by Laurent's milkvetch. The exception request includes a plan to avoid, minimize, and mitigate for impacts on the rare plant population.

# 5.0 Temporary and Permanent Impacts

The construction area for WREFI and WREFII West is confined to the regulatory site boundary/micrositing corridors included in the Site Certificate, as shown in Figure 1 and Figure 2. The WREFI and WREFII West components and their assumed temporary and permanent impact acreage are shown in Table 4, as required by condition PRE-FW-01. The SCADA system is incorporated into the components listed in Table 4. The temporary impact areas for each component often overlaps with the temporary impact areas for other components; therefore, the values presented in Table 4 should not be compared against the temporary impacts by habitat subtype presented in Table 5 for WREFI and Table 6 for WREFII West. For instance, the collection system is usually sited adjacent to access roads and turbine pads, and their temporary impact areas overlap.

**Table 4. Assumed Temporary and Permanent Impact Acreage for WREFI and WREFII West Components**

| Component | Temporary Impact per Component[1] | Permanent Impact per Component | Number of Components | Project-Wide Temporary Impact by Component[1] | Project-Wide Permanent Impact by Component |
|---|---|---|---|---|---|
| Turbine[2] | 1.57acres | 0.05 acres | 120 | 188.4 acres | 6.0 acres |
| Collector Substation | N/A[3] | 1.69 acres[4] | 1 | N/A | 1.69 acres |
| O&M Building | N/A[3] | 0.86 acres[4] | 1 | N/A | 0.86 acres |
| Collection System | 4.8 acres per mile[5] | N/A[6] | 134.9 miles | 647.5 acres | N/A[6] |
| Met Towers | 0.04 acres | 0.01 acres | 4 | 0.16 acres | 0.04 acres |
| Access Roads | 4.2 acres per mile[7] | 1.9 acres per mile[8] | 42 miles | 176.4 | 80.4 |

| Component | Temporary Impact per Component[1] | Permanent Impact per Component | Number of Components | Project-Wide Temporary Impact by Component[1] | Project-Wide Permanent Impact by Component |
|---|---|---|---|---|---|
| Temporary Construction Area 1 | 30.7 | N/A[6] | 1 | 30.7 | N/A[6] |
| Temporary Construction Area 2 | 22.1 | N/A[6] | 1 | 22.1 | N/A[6] |
| **Project-Wide Grand Total** | | | | **1,065.3[8]** | **89.0** |

Note: All impacts are estimates based on GIS measurements.

1. Temporary impacts do not include the footprint of the permanent disturbance.
2. Turbine temporary impacts assume a 150-foot radius work area around the center of turbine minus the permanent impact footprint. Turbine permanent impacts extend 20 feet around center of turbine and includes the driveway.
3. N/A = not applicable. There are no temporary impacts associated with this component.
4. Includes driveway.
5. This assumes a 40-foot wide ground impact centered on the collection line.
6. N/A = not applicable. There are no permanent impacts associated with this component.
7. Access roads temporary impacts assume a 50-foot wide temporary ground impact centered on the access road minus the permanent impact footprint. The access roads permanent impacts assume a 16-foot wide permanent road surface.
8. This total includes 398 acres of overlap between the assumed temporary impact area of all components. The actual temporary impact minus overlap is 667.3 acres (Table 5).

Impacts may be permanent or temporary. Permanent impacts are defined as those impacts that will exist for the life of WREFI and WREFII West. Temporary impacts are those impacts that will be limited to the construction period, although recovery of habitat will vary by type. For example, the recovery period for agricultural areas that are temporarily disturbed could be as short as 1 to 3 years, while grasslands generally recover within 3 to 7 years and shrublands may require 10 to 50 years to recover (with the longer recovery periods being associated with mature sagebrush habitats). The certificate holders will restore temporary impacts consistent with their respective revegetation plans.

Pre-construction Washington ground squirrel surveys did not identify any colonies within the survey area (Tetra Tech 2019a). Therefore, **there are no impacts to Category 1 habitat**. Also, these surveys did not identify any Washington ground squirrel colonies whose associated areas of potential Washington ground squirrel use extend into the Wheatridge West site boundary. Therefore, there are no impacts to Category 2 Washington ground squirrel habitat, and the only impacts to Category 2 habitat comes from overlap with ODFW mule deer winter range.

Table 5 and Table 6 show the acres of permanent and temporary impacts in each habitat category by habitat subtype for WREFI and WREFII West, respectively. No wetlands, perennial streams or other aquatic habitats are addressed in this document because no components are planned for these habitat types. Figure 1 shows the location of temporary and permanent impacts from WREFI and Figure 2 shows the location of temporary and permanent impacts from WREFII West.

**Table 5. Temporary and Permanent Impacts by Habitat Category and Habitat Subtype in WREFI**

| Habitat Category and Habitat Subtype | | Impacts (acres)[1] | |
|---|---|---|---|
| | | Temporary | Permanent |
| **Category 3** | | | |
| Developed-Revegetated or Other Planted Grassland | | 3.3 | 0.2 |
| Grassland-Native Perennial | | 6.5 | 0.7 |
| Shrub-steppe-Basin Big Sagebrush | | 1.5 | 0.4 |
| Shrub-steppe-Rabbitbrush/Snakeweed | | 2.4 | 0.0 |
| **Subtotal Category 3** | | **13.7** | **1.3** |
| **Category 4** | | | |
| Grassland-Exotic Annual | | 3.8 | 0.5 |
| **Subtotal Category 4** | | **3.8** | **0.5** |
| **Category 6** | | | |
| Developed-Dryland Wheat | | 195.6 | 24.6 |
| Developed-Other | | 0.7 | 0.1 |
| **Subtotal Category 6** | | **196.4** | **24.7** |
| **Total for WREFI** | **240.5** | **214.0** | **26.5** |
| 1. Totals in this table may not be precise due to rounding. | | | |

**Table 6. Temporary and Permanent Impacts by Habitat Category and Habitat Subtype in WREFII West**

| Habitat Category and Habitat Subtype | Impacts (acres)[1] | |
|---|---|---|
| | Temporary | Permanent |
| **Category 2** | | |
| Developed-Revegetated or Other Planted Grassland | 87.4 | 16.3 |
| Grassland-Exotic Annual | 10.3 | 1.4 |
| Grassland-Native Perennial | 18.3 | 3.1 |
| **Subtotal Category 2** | **115.9** | **20.9** |
| **Category 3** | | |
| Developed-Revegetated or Other Planted Grassland | 41.1 | 3.3 |
| Grassland-Native Perennial | 26.1 | 4.8 |
| **Subtotal Category 3** | **67.2** | **8.0** |
| **Category 4** | | |
| Grassland-Exotic Annual | 13.6 | 0.9 |
| Shrub-steppe-Rabbitbrush/Snakeweed | 0.3 | 0.0 |
| **Subtotal Category 4** | **13.9** | **1.0** |

| Habitat Category and Habitat Subtype | | Impacts (acres)[1] | |
|---|---|---|---|
| | | Temporary | Permanent |
| **Category 6** | | | |
| Developed-Dryland Wheat | | 256.1 | 32.5 |
| Developed-Other | | 0.2 | 0.0 |
| **Subtotal Category 6** | | **256.3** | **32.5** |
| **Total for WREFII West** | **515.8** | **453.3** | **62.4** |
| 1. Totals in this table may not be precise due to rounding. | | | |

# 6.0 Methods for Calculating Mitigation

The HMP included in the ASC had used either a 2:1 or >1:1 ratio for impacts on Category 2 habitat, depending on whether or not that habitat is within big game winter ranges. Condition PRE-FW-04(g) of the site certificate establishes that mitigation ratios for Category 2 habitat should all be the same, and that mitigation should be proposed for temporary impacts to Category 4 shrub-steppe habitat (EFSC 2017). In a conference call on November 8, 2019, ODFW provided further clarification to ODOE and the certificate holders that temporary impacts to Category 2 grasslands (including native, annual, and revegetated grasslands) would not require mitigation and that revegetation of those temporary impacts should be adequate. The ratios have been modified to reflect all ODFW input. Table 7 shows the methods for calculating mitigation for permanent impacts and Table 8 shows the methods for calculating mitigation for temporary impacts. The certificate holders are not proposing compensatory mitigation under the ODFW Fish and Wildlife Habitat Mitigation Policy for impacts to Category 6 habitat.

**Table 7. Calculating Mitigation for Permanent Impacts**

| Habitat Category | Impact Acres | Mitigation Ratio[1] | Mitigation Description |
|---|---|---|---|
| Category 2 | 1 | 2 | The mitigation goal for Category 2 habitat is "no net loss" and "net benefit." Accordingly, mitigation for permanent impacts on Category 2 habitat needs to demonstrate a net benefit in quality or quantity. |
| Category 3 and Category 4 | 1 | 1 | The mitigation goal for Category 3 and 4 habitats is "no net loss" in quantity or quality. |
| Category 6 | 1 | 0 | The mitigation goal for impacts on Category 6 habitat is minimization; no compensatory mitigation proposed. |
| 1. Mitigation ratios follow recommendations included in the August 27, 2019 comment letter from ODFW to ODOE regarding the Draft Proposed Order for RFA 4. | | | |

**Table 8. Calculating Mitigation for Temporary Impacts**

| Habitat Category | Habitat Subtype | Impact Acres | Mitigation Ratio[1] | Mitigation Description |
|---|---|---|---|---|
| Category 2 | Grassland-Native Perennial, Grassland-Exotic Annual, Developed-Revegetated or Other Planted Grassland | 1 | 0 | The mitigation goal for Category 2 habitat is "no net loss" and "net benefit." All areas of temporary impacts would be restored at the site of impact to meet the "no net loss" requirement. The proposed mitigation ratio for permanent impacts (Table 6) to grasslands would meet the "net benefit" requirement for all impacts to Category 2 grasslands. |
| Category 3 | Shrub-steppe-Basin Big Sagebrush | 1 | 1 | The mitigation goal for Category 3 and 4 habitats is "no net loss" in quantity or quality. Depending on the habitat subtype temporarily disturbed, the proposed mitigation ratio would result in an equal or lesser amount of acreage of mitigation than what is impacted by the project. Combined with restoration of temporary impacts, the proposed mitigation ratio is intended to account for the temporary loss of habitat functionality and meet the "no net loss" goal. Temporary impacts to Category 3 and Category 4 Grasslands are not mitigated beyond restoration. |
| | Shrub-steppe-Rabbitbrush/Snakeweed | 1 | 0.5 | |
| | Grassland-Native Perennial, Developed-Revegetated or Other Planted Grassland | 1 | 0 | |
| Category 4 | Shrub-steppe-Rabbitbrush/ Snakeweed | 1 | 0.5 | |
| | Grassland-Exotic Annual | 1 | 0 | |
| Category 6 | Developed-Dryland Wheat, Developed-Other | 1 | 0 | The mitigation goal for Category 6 habitat is minimization; no compensatory mitigation is proposed. |

1. Mitigation ratios follow recommendations included in the August 27, 2019 comment letter from ODFW to ODOE regarding the Draft Proposed Order for RFA4.

# 7.0 Estimated Mitigation for WREFI and WREFII West

Table 9 applies the acres of temporary and permanent impacts shown in Table 5 with the mitigation ratios shown in Table 7 and Table 8 to estimate mitigation requirements for WREFI. Table 10 applies the acres of temporary and permanent impacts shown in Table 6 with the mitigation ratios shown in Table 7 and Table 8 to estimate mitigation requirements WREFII West.

**Table 9. Estimated Mitigation by Habitat Category and Habitat Subtype for WREFI**

| Habitat Category[1] | Habitat Subtype | Impact | Acres | Mitigation Ratio | Estimated Mitigation[2] | Mitigation Subtotal by Habitat Category[2] |
|---|---|---|---|---|---|---|
| 3 | Developed-Revegetated or Other Planted Grassland | Temp | 3.3 | 0 | 0.0 | 4.0 |
| | | Perm | 0.2 | 1 | 0.2 | |
| | Grassland-Native Perennial | Temp | 6.5 | 0 | 0 | |
| | | Perm | 0.7 | 1 | 0.7 | |
| | Shrub-steppe-Basin Big Sagebrush | Temp | 1.5 | 1 | 1.5 | |
| | | Perm | 0.4 | 1 | 0.4 | |
| | Shrub-steppe-Rabbitbrush/ Snakeweed | Temp | 2.4 | 0.5 | 1.2 | |
| | | Perm | 0.0 | 1 | 0.0 | |
| 4 | Grassland-Exotic Annual | Temp | 3.8 | 0 | 0.0 | 0.5 |
| | | Perm | 0.5 | 1 | 0.5 | |
| **TOTALS** | | | | | | **4.5** |

1. No mitigation is accrued for impacts on Category 6 habitat.
2. Totals in this table may not be precise due to rounding.

**Table 10. Estimated Mitigation by Habitat Category and Habitat Subtype for WREFII West**

| Habitat Category[1] | Habitat Subtype | Impact | Acres | Mitigation Ratio | Estimated Mitigation[2] | Mitigation Subtotal by Habitat Category[2] |
|---|---|---|---|---|---|---|
| 2 | Developed-Revegetated or Other Planted Grassland | Temp | 87.4 | 0 | 0 | 41.8[3] |
| | | Perm | 16.3 | 2 | 32.7 | |
| | Grassland-Exotic Annual | Temp | 10.3 | 0 | 0 | |
| | | Perm | 1.4 | 2 | 2.9 | |
| | Grassland-Native Perennial | Temp | 18.3 | 0 | 0 | |
| | | Perm | 3.1 | 2 | 6.2 | |
| 3 | Developed-Revegetated or Other Planted Grassland | Temp | 41.1 | 0 | 0.0 | 8.1 |
| | | Perm | 3.3 | 1 | 3.3 | |
| | Grassland-Native Perennial | Temp | 26.1 | 0 | 0 | |
| | | Perm | 4.8 | 1 | 4.8 | |
| 4 | Grassland-Exotic Annual | Temp | 13.6 | 0 | 0.0 | 1.1 |
| | | Perm | 0.9 | 1 | 0.9 | |

| Habitat Category[1] | Habitat Subtype | Impact | Acres | Mitigation Ratio | Estimated Mitigation[2] | Mitigation Subtotal by Habitat Category[2] |
|---|---|---|---|---|---|---|
| | Shrub-steppe-Rabbitbrush/ Snakeweed | Temp | 0.3 | 0.5 | 0.2 | |
| | | Perm | 0.0 | 1 | 0.0 | |
| **TOTALS** | | | | | | **51.0** |

1. No mitigation is accrued for impacts on Category 6 habitat.
2. Totals in this table may not be precise due to rounding.
3. All Category 2 habitat mitigation originates from impacts in mule deer winter range.

# 8.0 Habitat Mitigation Area

The Habitat Mitigation Area (HMA) is the area where the certificate holders are proposing to perform enhancement and preservation actions that are in addition to the revegetation of areas of temporary impacts associated with WREFI and WREFII West. The HMA must be large enough and have the characteristics to meet the standards set in OAR 635-415-0025.

According to ODFW standards, areas appropriate for mitigation of Category 2 and Category 3 habitat impacts must provide "in-kind" mitigation which creates similar structure and function to that being disturbed and also be "in-proximity" to the Project and have potential for habitat enhancement. The certificate holders identified privately-owned land that contains native and revegetated uplands of interest and importance for conservation. The certificate holders also looked for land that is within designated mule deer winter range. The certificate holders have secured an option agreement for up to 300 acres to be placed into a conservation easement where the HMA will be located. Once finalized, the executed conservation easement will be provided to ODOE.

## 8.1 Habitat Assessment and Mitigation Accounting

The certificate holders have identified a 187.9-acre parcel of suitable in-kind and in-proximity habitat on 2,100 acres of private land along Rock Creek in Gilliam County within which they will establish a 55.5-acre HMA. Per Condition PRE-FW-04(d), a habitat assessment of the HMA has occurred, using methods approved by ODFW (Appendix A). Primary habitat subtypes were delineated on the property by qualified biologists (the private landowners of the HMA) using an intuitive meandering pedestrian survey. The 187.9-acre parcel that will contain the 55.5-acre HMA includes two primary habitat subtypes: 1 - Native Perennial Grassland and Shrub-steppe Mosaic; and 2 - Revegetated or Other Planted Grassland (Figure 3). A few rock escarpments also occur within the parcel. These habitats correspond with those being impacted by WREFI and WREFII West (Section 5.0). The Native Perennial Grassland and Shrub-steppe Mosaic includes native perennial grassland areas interspersed with sagebrush, rabbitbrush, and snakeweed. Representative photos of each habitat subtype are included in Appendix B. The primary habitat

subtypes within the 187.9-acre parcel that will contain the 55.5-acre HMA correspond to Category 3 and Category 4 habitat subtype descriptions for WREFI and WREFII West. However, the primary habitat subtypes in the 187.9-acre parcel that will contain the 55.5-acre HMA are in designated mule deer winter range (ODFW 2012) and are therefore modified to a Category 2 habitat.

Table 11 shows the acres of primary habitat subtypes that occur within the 187.9-acre parcel that will contain the 55.5-acre HMA that would provide a no net loss and/or a net benefit for areas disturbed by Wheatridge West. Table 12 shows the mitigation accounting for the combined mitigation requirements for WREFI and WREFII West and shows a net benefit for impacts in Category 2 habitat and a no net loss for impacts in Category 3 and Category 4 habitat.

**Table 11. Primary Habitat Subtypes that Occur on the HMA**

| Habitat Category | Primary Habitat Subtype | Acres | Description |
|---|---|---|---|
| 2 | Native Perennial Grassland and Shrub-steppe Mosaic | 90 | *Grassland*<br>Soil type and depth varies but is mostly deep loamy soils. Some shallow soils on plateaus and west or south facing slopes (stony loam). Small basalt escarpments on slopes. Canyons include small seeps and springs and basin wildrye, wild rose, clematis, larkspur and phacelia.<br>Dominated by native perennial bunchgrass consisting of bluebunch wheatgrass, Sandberg's bluegrass, Idaho fescue and needle-and-thread grass. Scattered mature and young shrubs, not dense except in canyons. Sagebrush and rabbitbrush. Small areas of broom snakeweed scattered in disturbed areas. Numerous native forb species such as phlox, balsamroot, woolypod milkvetch, lupine, mariposa lily, shooting star and many others.<br>Includes small patches of exotic annual grass and/or weeds (cheatgrass, bulbous bluegrass, cereal ryegrass, ventenata, tumblemustard, etc.). Open, low shrubs such as snakeweed and rabbitbrush in the annual grass sites.<br>*Shrub-steppe Mosaic*<br>Shrub-steppe patches in predominantly grassland habitat. Shrublands are dominated by cover of basin big sagebrush, some gray and green rabbitbrush and broom snakeweed. Open low shrubs such as buckwheats (*Erigonum* sp.) found in patches. |
| | Revegetated or Other Planted Grassland | 97.9 | Soils are mostly silt-loam. Perennial grassland revegetated after being previously farmed for dryland wheat, some historically enrolled in the Conservation Reserve Program or other previously farmed sites. Mature grasslands dominated by intermediate and tall wheatgrass and Sandberg or bulbous bluegrass, some fescue. Enhancements in the past ten years in some areas (seeding native perennials such as bluebunch wheatgrass, Idaho fescue, Sandberg's bluegrass and bottlebrush squirreltail) Residual (not previously plowed) native vegetation patches in a few locations and also on steeper slopes next to native perennial grassland. Scattered mature and young shrubs throughout (gray or green rabbitbrush, sagebrush), brome snakeweed in disturbed areas. Includes small patches of exotic annual grassland and/or weeds. Non-native forbs such as salsify, storksbill and field bindweed and native forbs such as lupine, shaggy fleabane and common yarrow. |

**Table 12. Mitigation Accounting**

| Impacted Habitat Subtype | Impacted Habitat Category | Mitigation Debit from Table 9 & 10 (Acres) | HMA Primary Habitat Subtypes Mitigation Credit – Category 2 (Acres) | | Mitigation Debit Balance (Acres) |
|---|---|---|---|---|---|
| | | | Revegetated or Other Planted Grassland | Native Perennial Grassland and Shrub-steppe Mosaic | |
| Developed-Revegetated or Other Planted Grassland | 2 | -32.7 | +32.7 | - | **0** |
| Grassland-Exotic Annual | | -2.9 | – | +2.9 | **0** |
| Grassland-Native Perennial | | -6.2 | – | +6.2 | **0** |
| All Remaining Habitat | 3 and 4 | -13.7 | – | +13.7 | **0** |
| **HMA Credit Subtotal by Habitat Subtype** | | | **32.7** | **22.8** | |
| **HMA Credit Grand Total** | | | **55.5** | | |

Wildlife species usage of the approximately 2,100-acre property in which the HMA lies has been recorded for the past 11 years and is similar to what has been recorded during surveys of Wheatridge West. There are 152 bird species recorded from the property containing the HMA. This includes special status nesting bird species such as grasshopper sparrow. Several species of raptors, including golden eagle and ferruginous hawk, have been documented hunting on the property containing the HMA and some species nest onsite or in the general area. Mule deer and occasionally elk are observed wintering in the HMA and nearby. Appendix C includes a list of wildlife species observed at the property. Wind-blown ridges and south-facing slopes provide for early green-up big game forage. Other long-term conserved habitat (approximately 324 acres) consisting of Native Perennial Grassland and Shrub-steppe Mosaic, cliffs and escarpments along canyons is nearby (Figure 3). The property supports documented Washington ground squirrel use areas and habitat. With the addition of this HMA, a larger more contiguous tract of preserved habitat will be available for wildlife that provides important functionality and connectivity along Rock Creek in the Columbia Plateau.

## 8.2 Habitat Enhancement Actions

The HMA will be placed into a conservation easement that will not allow development of the HMA for the life of WREFI and WREFII West. Besides such legal protection to ensure no development, potential enhancement actions for the HMA include the following.

- Grazing practices compatible with conservation—wildlife habitat values will have priority and incompatible livestock grazing practices will not be allowed.
- The certificate holders will work with the landowner to monitor and control County-designated noxious weeds impacting wildlife habitat quality across the entire HMA.
- Seeding and planting sagebrush—sagebrush will be planted on 1.9 acres of the HMA (Figure 3) to account for the temporary (1.5 acres) and permanent impacts (0.4 acres) to 1.9 acres of Category 3 Shrub-steppe with Basin Big Sagebrush habitat subtype. Sagebrush planting will provide year-round thermal and hiding cover and browse for mule deer.
- A plan for fire response and control at the HMA will be coordinated with the landowner. This could be a stand-alone plan or the HMA could be included in the each of the Emergency Management Plans. It will include fire prevention measures, methods to detect fires, and a protocol for fire response and suppression. Some example measures that could be included are:
    - No vehicular travel will be permitted during periods of high fire potential.
    - When any spark producing equipment is being used onsite, the operator and assistants will have fire suppression items readily available and cell phones for calling responders if needed.
    - Fire response and suppression would be handled by the North Gilliam County Rural Fire Protection District, 1500 Railroad Ave, Arlington, OR 97812, (541) 454-2900.
    - Suppression efforts would be tailored to the habitat subtypes on the HMA, such as allowing grass fires while focusing suppression on sagebrush plantings.
- Modification of winter human activities— commitment to minimize human-caused impacts to mule deer during the winter period will enhance the HMA's ability to provide quality winter range. Some of the desirable winter range values described by ODFW are thermal cover, security from predation and harassment, adequate nutritional and escape from disturbance (ODFW 2013).
- Wildlife Projects:
    - Where old barbed wire fence on the HMA presents potential problems for big game and other wildlife, the certificate holders will work with the landowner to remove such fencing. An estimated 0.25-miles of old interior fencing is laid down or not functioning within the HMA boundary.
    - Upland gamebird/CRP-type guzzler as a watering source for wildlife. Example would be a full-ramp 500-gallon guzzler by Rainmaker Wildlife.
- Habitat protection will involve restricting any uses of the HMA that would be inconsistent with the goals of no net loss of habitats in Categories 2, 3, and 4 and a net benefit to Category 2 habitat quantity or quality.

## 8.3 HMA Monitoring

The certificate holders will employ a qualified investigator (wildlife biologist, botanist, or revegetation specialist) to conduct monitoring at the HMA and the success of its protection and (within applicable acres) enhancements. Monitoring duration is for the life of WREFI and WREFII West, with annual monitoring occurring over the first 5 years. After Year 5, a long-term monitoring plan will be developed in consultation with ODOE and ODFW. At a minimum, annual monitoring for the first 5 years will include assessments of:

- Description of the amount and quality of vegetation at the HMA. Describe year-to-date climate data;
- Success of weed control measures;
- Degree of recovery of native grasses and forbs following disturbances such as habitat enhancement actions, fire, or erosion;
- Success of sagebrush plantings monitored in a 50- by 100-foot plot within each of the two planting areas (Figure 3). Three 50-foot transects will be established perpendicular to the long side of the plot. The transect monitoring will be of 6-foot wide belt transects with all shrubs occurring within the belt transect being recorded;
- Wildlife observed and notes on special status species (wildlife and plants) present;
- Observations of wintering mule deer will be recorded as observed from a distance (so disturbance is kept at a minimum); and
- Maintenance needs of guzzler.

Methods and results of all monitoring will be reported to ODOE and ODFW, along with a report of the mitigation/enhancement measures undertaken since the last monitoring report. An annual monitoring report outline is included as Appendix D. This outline is subject to change based on actual executed easement.

## 8.4 HMA Success Criteria

The goal of the habitat mitigation described herein is to protect and enhance a sufficient quantity of habitat to meet ODFW standards of no net loss of habitat Category 3 and Category 4 and a net gain in habitat quantity and quality of Category 2. Habitat protection alone—apart from enhancement—is not sufficient to meet the net-benefit criterion for Category 2 habitat. The entire HMA is within Category 2 mule deer winter range, so modifying the category through habitat enhancement actions is not possible. However, habitat enhancement actions will be implemented, and progress can be monitored against baseline conditions to determine success. It is also assumed that the Category 2 habitat in the HMA is currently functioning at a higher quality than the Category 2 habitat being impacted because the HMA contains a greater acreage of contiguous native grassland and shrub-steppe mosaic compared to what is being impacted (122 acres at the HMA versus approximately 60 acres impacted by WREFI and WREFII West). Table 13 shows the success criteria for the habitat enhancement actions proposed in Section 7.2.

**Table 13. HMA Success Criteria**

| Habitat Enhancement Action | Success Criteria |
|---|---|
| Grazing practices compatible with conservation | The Easement terms state that grazing, nature study, and other land uses are permitted provided that conservation and wildlife habitat values and wildlife use shall take precedence and priority where such uses are or may be deemed incompatible.<br>Under the current ownership, no grazing is expected. If grazing is used in the future, monitoring of shrub recruitment and recruitment of other desirable shrub-steppe species can occur through photo point monitoring and qualitative observations. |
| County-designated noxious weed control | Control of County-designated noxious weeds at the HMA. Photo point monitoring will show that known sites of noxious weeds are not expanding or have been reduced or eliminated. Chemical control is the most likely method to be used; however, mechanical control methods may also be used depending on site-specific conditions. |
| Planting of sagebrush. | Successful establishment of sagebrush on 1.9 acres of the HMA in two areas (Figure 3). Photo point monitoring will show successful shrub establishment where planted. The average density or frequency of the shrub component should be at least 50 percent of the reference site established for revegetation monitoring. |
| Fire response plan | Deliver a plan for the HMA to the North Gilliam County Rural Fire Protection District |
| Modification of winter human activities | Minimize human disturbance on the HMA from December 1 to March 31. Schedule routine ranch activities to be performed during other times of the year. There are no public roads or access points in or adjacent to the HMA. Ensure that signage where public roads intersect with access points to the property within which the HMA is located are clearly marked as private property with no trespassing. |
| Removal of old barbed wire fences | Removal and disposal of approximately 0.25-miles of old barbed wire fencing will be deemed successful through photographic documentation. |
| Installation of a wildlife guzzler | This action will be deemed successful after installation is complete. Monitoring reports will confirm continued operation and describe any maintenance activities performed to keep the guzzler in operation. |

# 9.0 Implementation Schedule

As required by condition PRE-FW-04 (e), Table 14 includes a schedule for implementation of all mitigation actions, including those covered in other pre-construction compliance plans.

**Table 14. Mitigation Implementation Schedule**

| Mitigation Action | Schedule | Associated Plans |
|---|---|---|
| Restoration and revegetation of temporary construction-related impacts. | As soon as possible following construction. Late fall seeding, just before the soil freezes, is typical when seeding grasses in the Columbia basin shrub-steppe ecoregion. Seeding can occur through early spring. | WREF I Revegetation Plan<br>WREF II Revegetation Plan |
| Monitoring revegetation success. | Annually for the first 5 years. Annual monitoring is anticipated to occur in the fall, with the annual monitoring report being provided the following spring. The certificate holders will consult with ODOE and ODFW to design a long-term monitoring schedule. | WREF I Revegetation Plan<br>WREF II Revegetation Plan |
| Monitoring weed control in revegetation areas. | Annually for the first five years. Early detection is paramount for successful weed control. Therefore, monitoring may occur earlier in the growing season and again during revegetation monitoring. Reporting on noxious weeds will be included in the revegetation annual monitoring report. The certificate holders will consult with ODOE and ODFW to design a long-term monitoring schedule. | WREFI Noxious Weed Control Plan<br>WREFII Noxious Weed Control Plan |
| Securing the conservation easement establishing the HMA. | Prior to operations. | WREFI and WREFII HMP |
| Performing habitat enhancement actions at the HMA. | Appropriate timeframe after construction. | WREFI and WREFII HMP |
| Monitoring habitat enhancement actions at the HMA. | Annually for the first 5 years. Annual monitoring is anticipated to occur in the fall, with the annual monitoring report being provided the following spring. Then the certificate holders will consult with ODOE and ODFW to design a long-term monitoring schedule. | WREFI and WREFII HMP |

# 10.0 Amendment of the HMP

This HMP may be amended by agreement of the certificate holders and EFSC. Such amendments may be made without amendment of the site certificate. EFSC authorizes ODOE to agree to amendments to this plan. ODOE shall notify EFSC of all amendments, and EFSC retains the authority to approve, reject, or modify any amendment of this plan agreed to by ODOE.

# 11.0 References

EFSC (Energy Facility Siting Council). 2017a. Site Certificate for the Wheatridge Wind Energy Facility. Issued April 28, 2017.

EFSC. 2017b. First Amended Site Certificate for the Wheatridge Wind Energy Facility. Issued July 27, 2017.

EFSC. 2018a. Second Amended Site Certificate for the Wheatridge Wind Energy Facility. Issued, November 16, 2018.

EFSC. 2018b. Third Amended Site Certificate for the Wheatridge Wind Energy Facility. Issued December 14, 2018.

EFSC. 2019. Fourth Amended Site Certificate for the Wheatridge Wind Energy Facility. Issued November 22, 2019.

ODFW (Oregon Department of Fish and Wildlife). 2012. Elk and Deer Winter Range for Eastern Oregon, East of the Crest of the Cascades. GIS data files (2). Available online at: https://nrimp.dfw.state.or.us/DataClearinghouse/default.aspx?p=202&XMLname=885.xml

ODFW. 2013. 2013 Oregon Big Game Winter Range Habitat Rationale. September 6, 2013.

Tetra Tech. 2019a. 2019 Washing Ground Squirrel Survey Report. Prepared for NextEra Energy. Portland, OR.

Tetra Tech. 2019b. Wheatridge Wind Energy Facility 2019 Rare Plant Survey Report. September. Prepared for Wheatridge Wind Energy, LLC.

# Figures

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# Figure 1

## Wheatridge Renewable Energy Facility I

### Habitat Mitigation Plan

**Temporary and Permanent Impacts by Habitat Category**

**MORROW COUNTY, OR**

- Wheatridge Renewable Energy Facility I Site Boundary
- Impact Area
- Map Grid
- City/Town
- County Boundary

**Raptor Nest Species (2019)**

- Ferruginous Hawk
- Swainson's Hawk
- Burrowing Owl

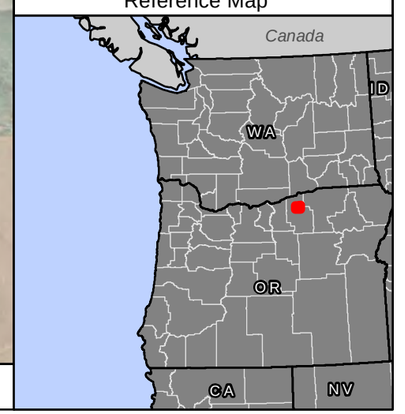
**0.25 Mile Buffer**

- Ferruginous Hawk
- Swainson's Hawk
- Burrowing Owl

TETRA TECH

NEXTera ENERGY RESOURCES

Reference Map




1:40,000 WGS 1984 UTM Zone 11N

0 0.5 1 2 3 4 Miles

Not for Construction

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# Figure 1.1

# Wheatridge Renewable Energy Facility I

## Habitat Mitigation Plan

**Temporary and Permanent Impacts by Habitat Category**

**MORROW COUNTY, OR**

4689

DW
DW
DW
DW
DW
DW
DW
GB
GB
GB
GA
GA
SSA
GA
SSA
SSA
SSA

- Wheatridge Renewable Energy Facility I Site Boundary
- Impact Area

**Impact Type**

- Permanent
- Temporary

**Raptor Nest Species (2019)**

- Ferruginous Hawk
- Swainson's Hawk
- Burrowing Owl

**0.25 Mile Buffer**

- Ferruginous Hawk
- Swainson's Hawk
- Burrowing Owl

Habitat Categorization

Category 1 - None Mapped

Category 2 - Blue

Category 3 - Green

Category 4 - Orange

Category 5 - None Mapped

Category 6 - Yellow

| Habitat Code | Habitat Description |
|---|---|
| SSA | Shrub-steppe-Basin Big Sagebrush |
| DW | Developed-Dryland Wheat |
| GA | Grassland-Exotic Annual |
| GB | Grassland-Native Perennial |
| DX | Developed-Other |
| SSB | Shrub-steppe-Rabbitbrush/Snakeweed |
| RVG | Developed-Revegetated or Other Planted Grassland |

TETRA TECH

NEXTera ENERGY RESOURCES

1:5,000 WGS 1984 UTM Zone 11N

0 0.125 0.25 0.5 Miles

Not for Construction

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# Figure 1.2

## Wheatridge Renewable Energy Facility I

### Habitat Mitigation Plan

**Temporary and Permanent Impacts by Habitat Category**

**MORROW COUNTY, OR**

Wheatridge Renewable Energy Facility I Site Boundary

Impact Area

**Impact Type**

Permanent

Temporary

**Raptor Nest Species (2019)**

Ferruginous Hawk

Swainson's Hawk

Burrowing Owl

**0.25 Mile Buffer**

Ferruginous Hawk

Swainson's Hawk

Burrowing Owl

Habitat Categorization

Category 1 - None Mapped

Category 2 - Blue

Category 3 - Green

Category 4 - Orange

Category 5 - None Mapped

Category 6 - Yellow

| Habitat Code | Habitat Description |
|---|---|
| SSA | Shrub-steppe-Basin Big Sagebrush |
| DW | Developed-Dryland Wheat |
| GA | Grassland-Exotic Annual |
| GB | Grassland-Native Perennial |
| DX | Developed-Other |
| SSB | Shrub-steppe-Rabbitbrush/Snakeweed |
| RVG | Developed-Revegetated or Other Planted Grassland |

TETRA TECH

NEXTera ENERGY RESOURCES

1:5,000 WGS 1984 UTM Zone 11N

0 0.125 0.25 0.5 Miles

Not for Construction

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# Figure 1.3

# Wheatridge Renewable Energy Facility I

## Habitat Mitigation Plan

**Temporary and Permanent Impacts by Habitat Category**

**MORROW COUNTY, OR**

GB
DW
DW
DW
SSA
SSA
DW
DW
DW

- Wheatridge Renewable Energy Facility I Site Boundary
- Impact Area

**Impact Type**

- Permanent
- Temporary

**Raptor Nest Species (2019)**

- Ferruginous Hawk
- Swainson's Hawk
- Burrowing Owl

**0.25 Mile Buffer**

- Ferruginous Hawk
- Swainson's Hawk
- Burrowing Owl

Habitat Categorization

Category 1 - None Mapped

Category 2 - Blue

Category 3 - Green

Category 4 - Orange

Category 5 - None Mapped

Category 6 - Yellow

| Habitat Code | Habitat Description |
|---|---|
| SSA | Shrub-steppe-Basin Big Sagebrush |
| DW | Developed-Dryland Wheat |
| GA | Grassland-Exotic Annual |
| GB | Grassland-Native Perennial |
| DX | Developed-Other |
| SSB | Shrub-steppe-Rabbitbrush/Snakeweed |
| RVG | Developed-Revegetated or Other Planted Grassland |

TETRA TECH

NEXTera ENERGY RESOURCES

1:5,000 WGS 1984 UTM Zone 11N

0 0.125 0.25 0.5 Miles

Not for Construction

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# Figure 1.4

## Wheatridge Renewable Energy Facility I

### Habitat Mitigation Plan

**Temporary and Permanent Impacts by Habitat Category**

**MORROW COUNTY, OR**

- Wheatridge Renewable Energy Facility I Site Boundary
- Impact Area

**Impact Type**

- Permanent
- Temporary

**Raptor Nest Species (2019)**

- Ferruginous Hawk
- Swainson's Hawk
- Burrowing Owl

**0.25 Mile Buffer**

- Ferruginous Hawk
- Swainson's Hawk
- Burrowing Owl

Habitat Categorization

Category 1 - None Mapped

Category 2 - Blue

Category 3 - Green

Category 4 - Orange

Category 5 - None Mapped

Category 6 - Yellow

| Habitat Code | Habitat Description |
|---|---|
| SSA | Shrub-steppe-Basin Big Sagebrush |
| DW | Developed-Dryland Wheat |
| GA | Grassland-Exotic Annual |
| GB | Grassland-Native Perennial |
| DX | Developed-Other |
| SSB | Shrub-steppe-Rabbitbrush/Snakeweed |
| RVG | Developed-Revegetated or Other Planted Grassland |

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# Figure 1.5

# Wheatridge Renewable Energy Facility I

## Habitat Mitigation Plan

**Temporary and Permanent Impacts by Habitat Category**

**MORROW COUNTY, OR**

DW

DW

DW

Wheatridge Renewable Energy Facility I Site Boundary

Impact Area

**Impact Type**

Permanent

Temporary

**Raptor Nest Species (2019)**

Ferruginous Hawk

Swainson's Hawk

Burrowing Owl

**0.25 Mile Buffer**

Ferruginous Hawk

Swainson's Hawk

Burrowing Owl

Habitat Categorization

Category 1 - None Mapped

Category 2 - Blue

Category 3 - Green

Category 4 - Orange

Category 5 - None Mapped

Category 6 - Yellow

| Habitat Code | Habitat Description |
|---|---|
| SSA | Shrub-steppe-Basin Big Sagebrush |
| DW | Developed-Dryland Wheat |
| GA | Grassland-Exotic Annual |
| GB | Grassland-Native Perennial |
| DX | Developed-Other |
| SSB | Shrub-steppe-Rabbitbrush/Snakeweed |
| RVG | Developed-Revegetated or Other Planted Grassland |

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1:5,000 WGS 1984 UTM Zone 11N

0 0.125 0.25 0.5 Miles

Not for Construction

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# Figure 1.6

## Wheatridge Renewable Energy Facility I

### Habitat Mitigation Plan

**Temporary and Permanent Impacts by Habitat Category**

**MORROW COUNTY, OR**

Wheatridge Renewable Energy Facility I Site Boundary
Impact Area

**Impact Type**
Permanent
Temporary

**Raptor Nest Species (2019)**
Ferruginous Hawk
Swainson's Hawk
Burrowing Owl

**0.25 Mile Buffer**
Ferruginous Hawk
Swainson's Hawk
Burrowing Owl

Habitat Categorization
Category 1 - None Mapped
Category 2 - Blue
Category 3 - Green
Category 4 - Orange
Category 5 - None Mapped
Category 6 - Yellow

| Habitat Code | Habitat Description |
|---|---|
| SSA | Shrub-steppe-Basin Big Sagebrush |
| DW | Developed-Dryland Wheat |
| GA | Grassland-Exotic Annual |
| GB | Grassland-Native Perennial |
| DX | Developed-Other |
| SSB | Shrub-steppe-Rabbitbrush/Snakeweed |
| RVG | Developed-Revegetated or Other Planted Grassland |

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1:5,000 WGS 1984 UTM Zone 11N

0 0.125 0.25 0.5 Miles

Not for Construction

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# Figure 1.7

## Wheatridge Renewable Energy Facility I

### Habitat Mitigation Plan

**Temporary and Permanent Impacts by Habitat Category**

**MORROW COUNTY, OR**

- Wheatridge Renewable Energy Facility I Site Boundary
- Impact Area

**Impact Type**

- Permanent
- Temporary

**Raptor Nest Species (2019)**

- Ferruginous Hawk
- Swainson's Hawk
- Burrowing Owl

**0.25 Mile Buffer**

- Ferruginous Hawk
- Swainson's Hawk
- Burrowing Owl

Habitat Categorization

Category 1 - None Mapped

Category 2 - Blue

Category 3 - Green

Category 4 - Orange

Category 5 - None Mapped

Category 6 - Yellow

| Habitat Code | Habitat Description |
|---|---|
| SSA | Shrub-steppe-Basin Big Sagebrush |
| DW | Developed-Dryland Wheat |
| GA | Grassland-Exotic Annual |
| GB | Grassland-Native Perennial |
| DX | Developed-Other |
| SSB | Shrub-steppe-Rabbitbrush/Snakeweed |
| RVG | Developed-Revegetated or Other Planted Grassland |

TETRA TECH

NEXTera ENERGY RESOURCES

1:5,000 WGS 1984 UTM Zone 11N

0 0.125 0.25 0.5 Miles

Not for Construction

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# Figure 1.8

## Wheatridge Renewable Energy Facility I

### Habitat Mitigation Plan

**Temporary and Permanent Impacts by Habitat Category**

**MORROW COUNTY, OR**

Wheatridge Renewable Energy Facility I Site Boundary

Impact Area

**Impact Type**

Permanent

Temporary

**Raptor Nest Species (2019)**

Ferruginous Hawk

Swainson's Hawk

Burrowing Owl

**0.25 Mile Buffer**

Ferruginous Hawk

Swainson's Hawk

Burrowing Owl

Habitat Categorization

Category 1 - None Mapped

Category 2 - Blue

Category 3 - Green

Category 4 - Orange

Category 5 - None Mapped

Category 6 - Yellow

| Habitat Code | Habitat Description |
|---|---|
| SSA | Shrub-steppe-Basin Big Sagebrush |
| DW | Developed-Dryland Wheat |
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| RVG | Developed-Revegetated or Other Planted Grassland |

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NEXTera ENERGY RESOURCES

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# Figure 1.9

## Wheatridge Renewable Energy Facility I

### Habitat Mitigation Plan

**Temporary and Permanent Impacts by Habitat Category**

**MORROW COUNTY, OR**

- Wheatridge Renewable Energy Facility I Site Boundary
- Impact Area

**Impact Type**

- Permanent
- Temporary

**Raptor Nest Species (2019)**

- Ferruginous Hawk
- Swainson's Hawk
- Burrowing Owl

**0.25 Mile Buffer**

- Ferruginous Hawk
- Swainson's Hawk
- Burrowing Owl

Habitat Categorization

Category 1 - None Mapped

Category 2 - Blue

Category 3 - Green

Category 4 - Orange

Category 5 - None Mapped

Category 6 - Yellow

| Habitat Code | Habitat Description |
|---|---|
| SSA | Shrub-steppe-Basin Big Sagebrush |
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| GB | Grassland-Native Perennial |
| DX | Developed-Other |
| SSB | Shrub-steppe-Rabbitbrush/Snakeweed |
| RVG | Developed-Revegetated or Other Planted Grassland |

TETRA TECH

NEXTera ENERGY RESOURCES

1:5,000 WGS 1984 UTM Zone 11N

0 0.125 0.25 0.5 Miles

Not for Construction

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# Figure 1.10

## Wheatridge Renewable Energy Facility I

### Habitat Mitigation Plan

**Temporary and Permanent Impacts by Habitat Category**

**MORROW COUNTY, OR**

- Wheatridge Renewable Energy Facility I Site Boundary
- Impact Area

**Impact Type**

- Permanent
- Temporary

**Raptor Nest Species (2019)**

- Ferruginous Hawk
- Swainson's Hawk
- Burrowing Owl

**0.25 Mile Buffer**

- Ferruginous Hawk
- Swainson's Hawk
- Burrowing Owl

Habitat Categorization

Category 1 - None Mapped

Category 2 - Blue

Category 3 - Green

Category 4 - Orange

Category 5 - None Mapped

Category 6 - Yellow

| Habitat Code | Habitat Description |
|---|---|
| SSA | Shrub-steppe-Basin Big Sagebrush |
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| SSB | Shrub-steppe-Rabbitbrush/Snakeweed |
| RVG | Developed-Revegetated or Other Planted Grassland |

TETRA TECH

NEXTera ENERGY RESOURCES

1:5,000 WGS 1984 UTM Zone 11N

0 0.125 0.25 0.5 Miles

Not for Construction

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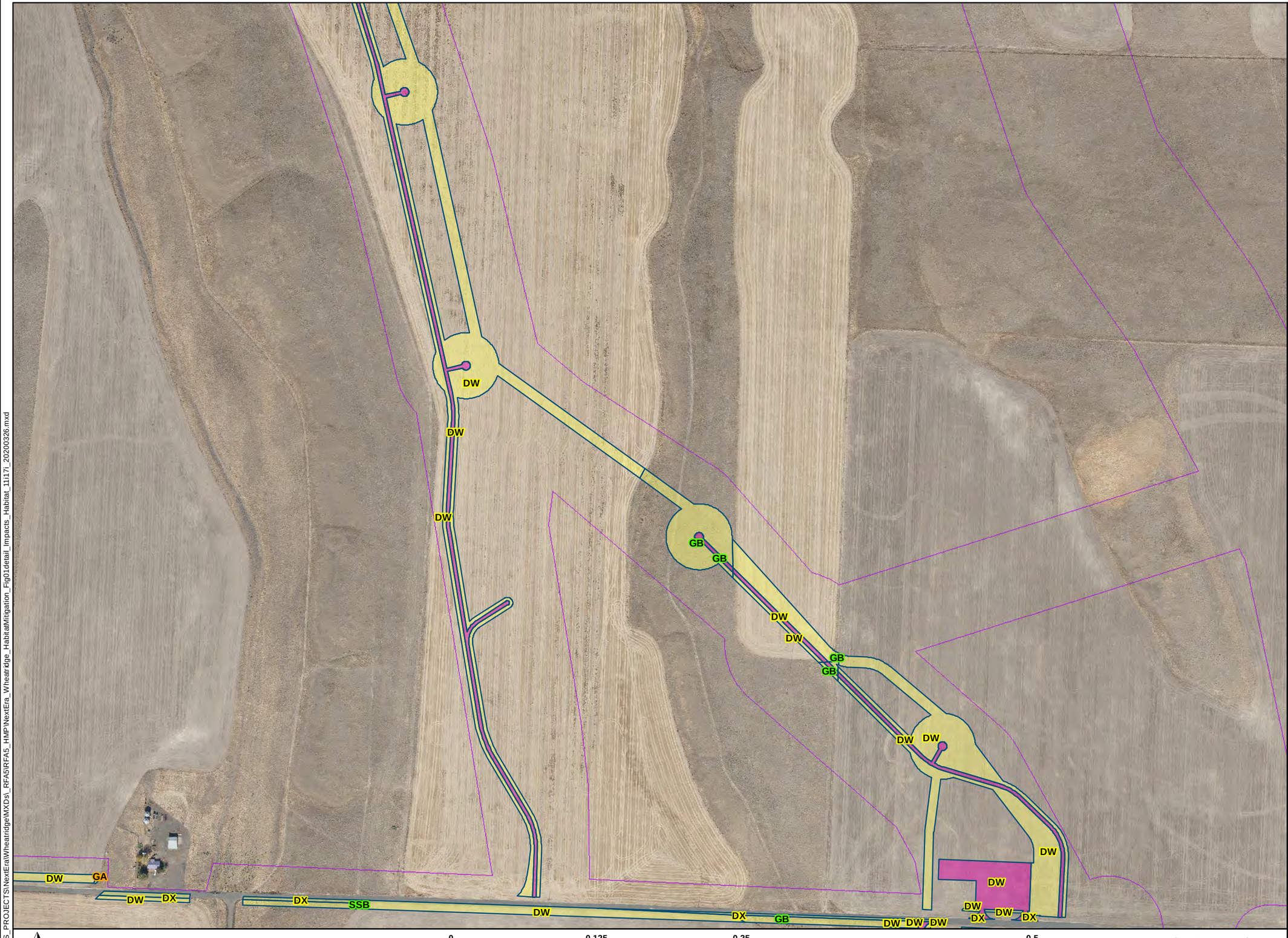
# Figure 1.11

# Wheatridge Renewable Energy Facility I

## Habitat Mitigation Plan

**Temporary and Permanent Impacts by Habitat Category**

**MORROW COUNTY, OR**




- Wheatridge Renewable Energy Facility I Site Boundary
- Impact Area

**Impact Type**

- Permanent
- Temporary

**Raptor Nest Species (2019)**

- Ferruginous Hawk
- Swainson's Hawk
- Burrowing Owl

**0.25 Mile Buffer**

- Ferruginous Hawk
- Swainson's Hawk
- Burrowing Owl

Habitat Categorization

Category 1 - None Mapped

Category 2 - Blue

Category 3 - Green

Category 4 - Orange

Category 5 - None Mapped

Category 6 - Yellow

| Habitat Code | Habitat Description |
|---|---|
| SSA | Shrub-steppe-Basin Big Sagebrush |
| DW | Developed-Dryland Wheat |
| GA | Grassland-Exotic Annual |
| GB | Grassland-Native Perennial |
| DX | Developed-Other |
| SSB | Shrub-steppe-Rabbitbrush/Snakeweed |
| RVG | Developed-Revegetated or Other Planted Grassland |

1:5,000 WGS 1984 UTM Zone 11N

0 0.125 0.25 0.5 Miles

Not for Construction

TETRA TECH

NEXTera ENERGY RESOURCES

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# Figure 1.12

## Wheatridge Renewable Energy Facility I

### Habitat Mitigation Plan

**Temporary and Permanent Impacts by Habitat Category**

**MORROW COUNTY, OR**

- Wheatridge Renewable Energy Facility I Site Boundary
- Impact Area

**Impact Type**

- Permanent
- Temporary

**Raptor Nest Species (2019)**

- Ferruginous Hawk
- Swainson's Hawk
- Burrowing Owl

**0.25 Mile Buffer**

- Ferruginous Hawk
- Swainson's Hawk
- Burrowing Owl

Habitat Categorization

Category 1 - None Mapped

Category 2 - Blue

Category 3 - Green

Category 4 - Orange

Category 5 - None Mapped

Category 6 - Yellow

| Habitat Code | Habitat Description |
|---|---|
| SSA | Shrub-steppe-Basin Big Sagebrush |
| DW | Developed-Dryland Wheat |
| GA | Grassland-Exotic Annual |
| GB | Grassland-Native Perennial |
| DX | Developed-Other |
| SSB | Shrub-steppe-Rabbitbrush/Snakeweed |
| RVG | Developed-Revegetated or Other Planted Grassland |

TETRA TECH

NEXTera ENERGY RESOURCES

1:5,000 WGS 1984 UTM Zone 11N

0 0.125 0.25 0.5 Miles

Not for Construction

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# Figure 1.13

# Wheatridge Renewable Energy Facility I

## Habitat Mitigation Plan

**Temporary and Permanent Impacts by Habitat Category**

**MORROW COUNTY, OR**

DW
DW
DW
DW
DW
SSB

Wheatridge Renewable Energy Facility I Site Boundary
Impact Area

**Impact Type**
Permanent
Temporary

**Raptor Nest Species (2019)**
Ferruginous Hawk
Swainson's Hawk
Burrowing Owl

**0.25 Mile Buffer**
Ferruginous Hawk
Swainson's Hawk
Burrowing Owl

Habitat Categorization
Category 1 - None Mapped
Category 2 - Blue
Category 3 - Green
Category 4 - Orange
Category 5 - None Mapped
Category 6 - Yellow

| Habitat Code | Habitat Description |
|---|---|
| SSA | Shrub-steppe-Basin Big Sagebrush |
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| GA | Grassland-Exotic Annual |
| GB | Grassland-Native Perennial |
| DX | Developed-Other |
| SSB | Shrub-steppe-Rabbitbrush/Snakeweed |
| RVG | Developed-Revegetated or Other Planted Grassland |

TETRA TECH

NEXTera ENERGY RESOURCES

1:5,000 WGS 1984 UTM Zone 11N

0 0.125 0.25 0.5 Miles

Not for Construction

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# Figure 1.14

## Wheatridge Renewable Energy Facility I

### Habitat Mitigation Plan

**Temporary and Permanent Impacts by Habitat Category**

**MORROW COUNTY, OR**

Wheatridge Renewable Energy Facility I Site Boundary
Impact Area

**Impact Type**
Permanent
Temporary

**Raptor Nest Species (2019)**
Ferruginous Hawk
Swainson's Hawk
Burrowing Owl

**0.25 Mile Buffer**
Ferruginous Hawk
Swainson's Hawk
Burrowing Owl

Habitat Categorization
Category 1 - None Mapped
Category 2 - Blue
Category 3 - Green
Category 4 - Orange
Category 5 - None Mapped
Category 6 - Yellow

| Habitat Code | Habitat Description |
|---|---|
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| GB | Grassland-Native Perennial |
| DX | Developed-Other |
| SSB | Shrub-steppe-Rabbitbrush/Snakeweed |
| RVG | Developed-Revegetated or Other Planted Grassland |

TETRA TECH

NEXTera ENERGY RESOURCES

1:5,000 WGS 1984 UTM Zone 11N

0 0.125 0.25 0.5 Miles

Not for Construction

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# Figure 1.15

# Wheatridge Renewable Energy Facility I

## Habitat Mitigation Plan

**Temporary and Permanent Impacts by Habitat Category**

**MORROW COUNTY, OR**

5001

5002

DW

DW

DW

DW

DW

DW

Wheatridge Renewable Energy Facility I Site Boundary

Impact Area

**Impact Type**

Permanent

Temporary

**Raptor Nest Species (2019)**

Ferruginous Hawk

Swainson's Hawk

Burrowing Owl

**0.25 Mile Buffer**

Ferruginous Hawk

Swainson's Hawk

Burrowing Owl

Habitat Categorization

Category 1 - None Mapped

Category 2 - Blue

Category 3 - Green

Category 4 - Orange

Category 5 - None Mapped

Category 6 - Yellow

| Habitat Code | Habitat Description |
|---|---|
| SSA | Shrub-steppe-Basin Big Sagebrush |
| DW | Developed-Dryland Wheat |
| GA | Grassland-Exotic Annual |
| GB | Grassland-Native Perennial |
| DX | Developed-Other |
| SSB | Shrub-steppe-Rabbitbrush/Snakeweed |
| RVG | Developed-Revegetated or Other Planted Grassland |

1:5,000 WGS 1984 UTM Zone 11N

0 0.125 0.25 0.5 Miles

Not for Construction

TETRA TECH

NEXTera ENERGY RESOURCES

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# Figure 1.16

# Wheatridge Renewable Energy Facility I

## Habitat Mitigation Plan

### Temporary and Permanent Impacts by Habitat Category

MORROW COUNTY, OR

1:5,000 WGS 1984 UTM Zone 11N

0 0.125 0.25 0.5 Miles

Not for Construction

☐ Wheatridge Renewable Energy Facility I Site Boundary

☐ Impact Area

**Impact Type**

🟪 Permanent

🟨 Temporary

**Raptor Nest Species (2019)**

▲ Ferruginous Hawk

▲ Swainson's Hawk

△ Burrowing Owl

**0.25 Mile Buffer**

☐ Ferruginous Hawk

☐ Swainson's Hawk

☐ Burrowing Owl

Habitat Categorization

Category 1 - None Mapped

Category 2 - Blue

Category 3 - Green

Category 4 - Orange

Category 5 - None Mapped

Category 6 - Yellow

| Habitat Code | Habitat Description |
|---|---|
| SSA | Shrub-steppe-Basin Big Sagebrush |
| DW | Developed-Dryland Wheat |
| GA | Grassland-Exotic Annual |
| GB | Grassland-Native Perennial |
| DX | Developed-Other |
| SSB | Shrub-steppe-Rabbitbrush/Snakeweed |
| RVG | Developed-Revegetated or Other Planted Grassland |

TETRA TECH

NEXTera ENERGY RESOURCES

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# Figure 1.17

## Wheatridge Renewable Energy Facility I

### Habitat Mitigation Plan

**Temporary and Permanent Impacts by Habitat Category**

**MORROW COUNTY, OR**

- Wheatridge Renewable Energy Facility I Site Boundary
- Impact Area

**Impact Type**

- Permanent
- Temporary

**Raptor Nest Species (2019)**

- Ferruginous Hawk
- Swainson's Hawk
- Burrowing Owl

**0.25 Mile Buffer**

- Ferruginous Hawk
- Swainson's Hawk
- Burrowing Owl

Habitat Categorization

Category 1 - None Mapped

Category 2 - Blue

Category 3 - Green

Category 4 - Orange

Category 5 - None Mapped

Category 6 - Yellow

| Habitat Code | Habitat Description |
|---|---|
| SSA | Shrub-steppe-Basin Big Sagebrush |
| DW | Developed-Dryland Wheat |
| GA | Grassland-Exotic Annual |
| GB | Grassland-Native Perennial |
| DX | Developed-Other |
| SSB | Shrub-steppe-Rabbitbrush/Snakeweed |
| RVG | Developed-Revegetated or Other Planted Grassland |

TETRA TECH

NEXTera ENERGY RESOURCES

1:5,000 WGS 1984 UTM Zone 11N

0 0.125 0.25 0.5 Miles

Not for Construction

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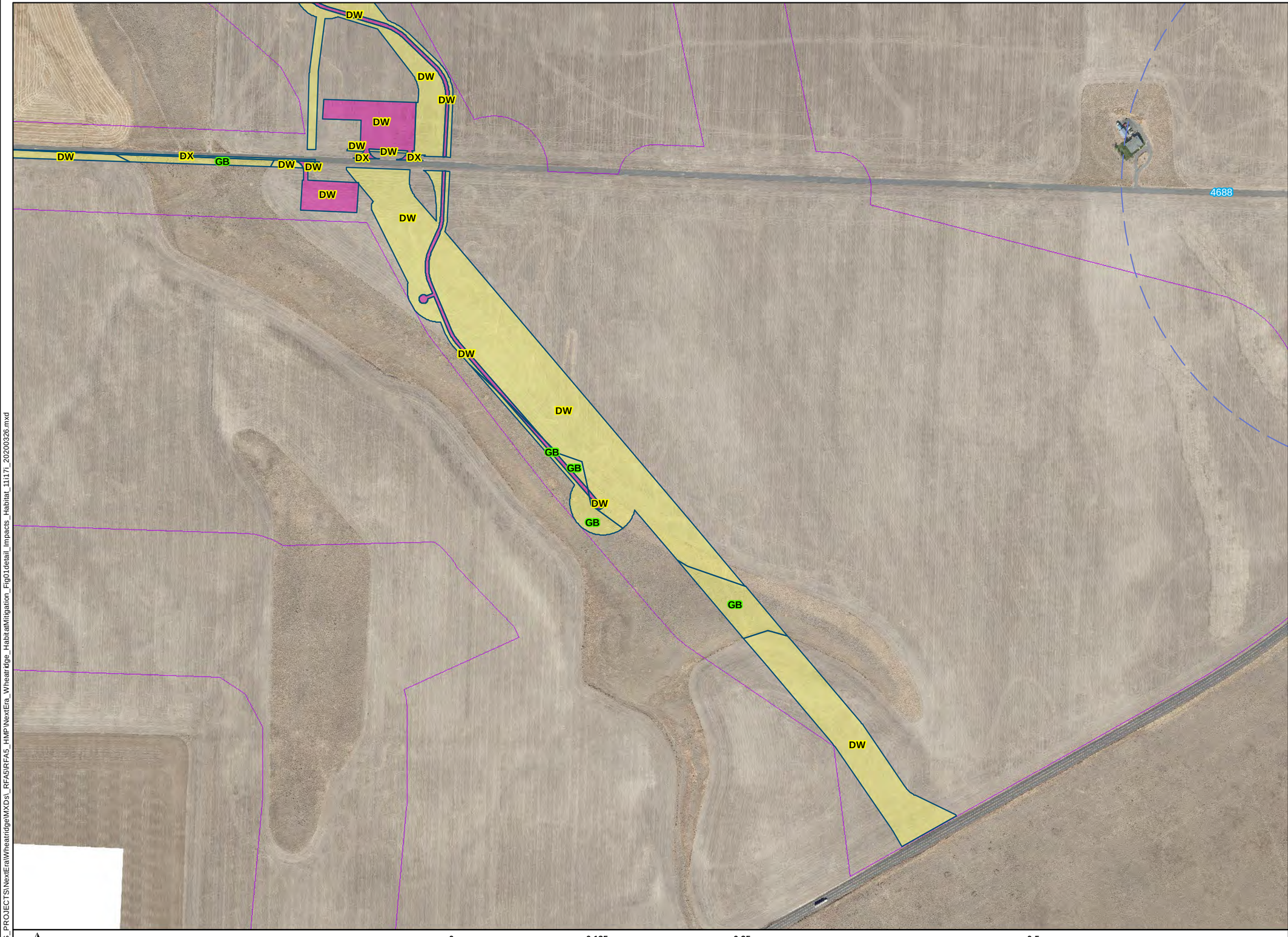
# Figure 1.18

# Wheatridge Renewable Energy Facility I

## Habitat Mitigation Plan

**Temporary and Permanent Impacts by Habitat Category**

**MORROW COUNTY, OR**




- Wheatridge Renewable Energy Facility I Site Boundary
- Impact Area

**Impact Type**

- Permanent
- Temporary

**Raptor Nest Species (2019)**

- Ferruginous Hawk
- Swainson's Hawk
- Burrowing Owl

**0.25 Mile Buffer**

- Ferruginous Hawk
- Swainson's Hawk
- Burrowing Owl

Habitat Categorization

Category 1 - None Mapped

Category 2 - Blue

Category 3 - Green

Category 4 - Orange

Category 5 - None Mapped

Category 6 - Yellow

| Habitat Code | Habitat Description |
|---|---|
| SSA | Shrub-steppe-Basin Big Sagebrush |
| DW | Developed-Dryland Wheat |
| GA | Grassland-Exotic Annual |
| GB | Grassland-Native Perennial |
| DX | Developed-Other |
| SSB | Shrub-steppe-Rabbitbrush/Snakeweed |
| RVG | Developed-Revegetated or Other Planted Grassland |

1:5,000 WGS 1984 UTM Zone 11N

0 0.125 0.25 0.5 Miles

Not for Construction

TETRA TECH

NEXTera ENERGY RESOURCES

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# Figure 2

## Wheatridge Renewable Energy Facility II

### Habitat Mitigation Plan

**Temporary and Permanent Impacts by Habitat Category**

**MORROW COUNTY, OR**

5002
5001
4688
4692
1727
3789
3770
4685
4696
Lexington

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32

- Wheatridge Renewable Energy Facility II Site Boundary
- Impact Area
- Map Grid
- City/Town
- County Boundary

**Raptor Nest Species (2019)**

- Ferruginous Hawk
- Swainson's Hawk
- Burrowing Owl

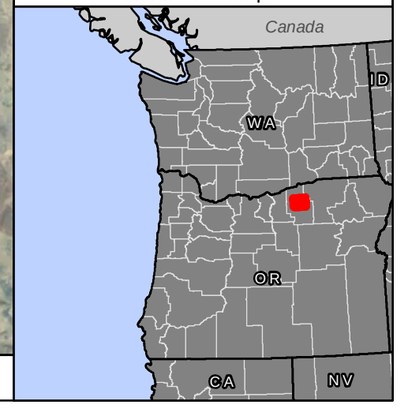
**0.25 Mile Buffer**

- Ferruginous Hawk
- Swainson's Hawk
- Burrowing Owl

TETRA TECH

NEXTera ENERGY RESOURCES

Reference Map




1:85,000 WGS 1984 UTM Zone 11N

0 0.5 1 2 3 4 Miles

Not for Construction

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# Figure 2.1

# Wheatridge Renewable Energy Facility II

## Habitat Mitigation Plan

**Temporary and Permanent Impacts by Habitat Category**

**MORROW COUNTY, OR**

- Wheatridge Renewable Energy Facility II Site Boundary
- Impact Area

**Impact Type**

- Permanent
- Temporary

**Constraints**

- Previously Observed Laurent's Milkvetch Population (Summer 2011)
- Laurent's Milkvetch Observations (Astragalus collinus var. laurentii) (Summer 2019)
- ODFW Mule Deer Winter Range

**Raptor Nest Species (2019)**

- Ferruginous Hawk
- Swainson's Hawk
- Burrowing Owl

**0.25 Mile Buffer**

- Ferruginous Hawk
- Swainson's Hawk
- Burrowing Owl

Habitat Categorization

Category 1 - None Mapped

Category 2 - Blue

Category 3 - Green

Category 4 - Orange

Category 5 - None Mapped

Category 6 - Yellow

| Habitat Code | Habitat Description |
|---|---|
| SSA | Shrub-steppe-Basin Big Sagebrush |
| DW | Developed-Dryland Wheat |
| GA | Grassland-Exotic Annual |
| GB | Grassland-Native Perennial |
| DX | Developed-Other |
| SSB | Shrub-steppe-Rabbitbrush/Snakeweed |
| RVG | Developed-Revegetated or Other Planted Grassland |

TETRA TECH

NEXTera ENERGY RESOURCES

1:5,000 WGS 1984 UTM Zone 11N

0 0.125 0.25 0.5 Miles

Not for Construction

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# Figure 2.2

# Wheatridge Renewable Energy Facility II

## Habitat Mitigation Plan

**Temporary and Permanent Impacts by Habitat Category**

**MORROW COUNTY, OR**

Wheatridge Renewable Energy Facility II Site Boundary

Impact Area

**Impact Type**

Permanent

Temporary

**Constraints**

Previously Observed Laurent's Milkvetch Population (Summer 2011)

Laurent's Milkvetch Observations (Astragalus collinus var. laurentii) (Summer 2019)

ODFW Mule Deer Winter Range

**Raptor Nest Species (2019)**

Ferruginous Hawk

Swainson's Hawk

Burrowing Owl

**0.25 Mile Buffer**

Ferruginous Hawk

Swainson's Hawk

Burrowing Owl

Habitat Categorization

Category 1 - None Mapped

Category 2 - Blue

Category 3 - Green

Category 4 - Orange

Category 5 - None Mapped

Category 6 - Yellow

| Habitat Code | Habitat Description |
|---|---|
| SSA | Shrub-steppe-Basin Big Sagebrush |
| DW | Developed-Dryland Wheat |
| GA | Grassland-Exotic Annual |
| GB | Grassland-Native Perennial |
| DX | Developed-Other |
| SSB | Shrub-steppe-Rabbitbrush/Snakeweed |
| RVG | Developed-Revegetated or Other Planted Grassland |

TETRA TECH

NEXTera ENERGY RESOURCES

1:5,000 WGS 1984 UTM Zone 11N

0 0.125 0.25 0.5 Miles

Not for Construction

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# Figure 2.3

# Wheatridge Renewable Energy Facility II

## Habitat Mitigation Plan

**Temporary and Permanent Impacts by Habitat Category**

**MORROW COUNTY, OR**

1727

DW

DW

Wheatridge Renewable Energy Facility II Site Boundary

Impact Area

**Impact Type**

Permanent

Temporary

**Constraints**

Previously Observed Laurent's Milkvetch Population (Summer 2011)

Laurent's Milkvetch Observations (Astragalus collinus var. laurentii) (Summer 2019)

ODFW Mule Deer Winter Range

**Raptor Nest Species (2019)**

Ferruginous Hawk

Swainson's Hawk

Burrowing Owl

**0.25 Mile Buffer**

Ferruginous Hawk

Swainson's Hawk

Burrowing Owl

Habitat Categorization

Category 1 - None Mapped

Category 2 - Blue

Category 3 - Green

Category 4 - Orange

Category 5 - None Mapped

Category 6 - Yellow

| Habitat Code | Habitat Description |
|---|---|
| SSA | Shrub-steppe-Basin Big Sagebrush |
| DW | Developed-Dryland Wheat |
| GA | Grassland-Exotic Annual |
| GB | Grassland-Native Perennial |
| DX | Developed-Other |
| SSB | Shrub-steppe-Rabbitbrush/Snakeweed |
| RVG | Developed-Revegetated or Other Planted Grassland |

TETRA TECH

NEXTera ENERGY RESOURCES

1:5,000 WGS 1984 UTM Zone 11N

0 0.125 0.25 0.5 Miles

Not for Construction

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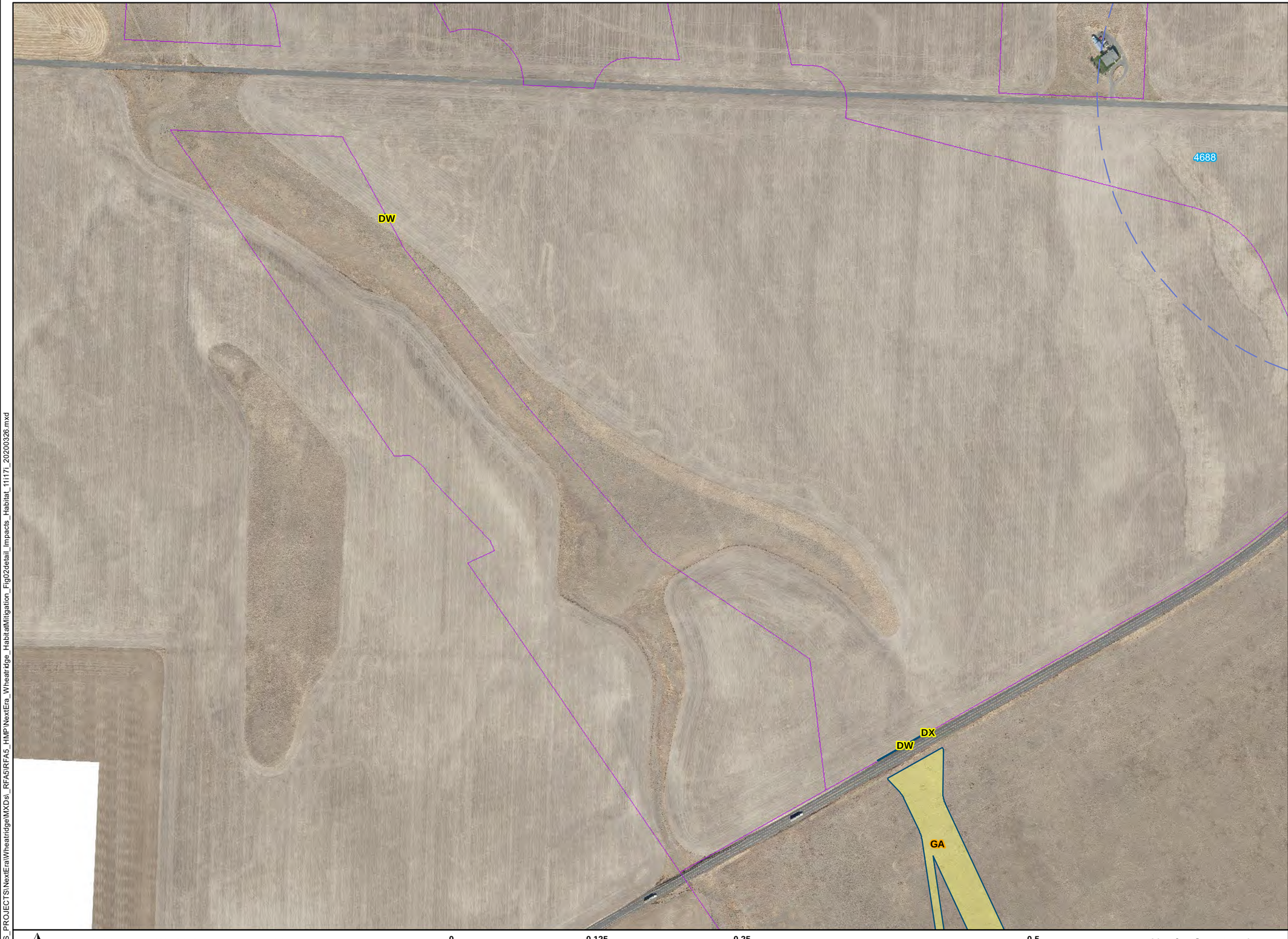
# Figure 2.4

# Wheatridge Renewable Energy Facility II

## Habitat Mitigation Plan

**Temporary and Permanent Impacts by Habitat Category**

**MORROW COUNTY, OR**




Wheatridge Renewable Energy Facility II Site Boundary

Impact Area

**Impact Type**

Permanent

Temporary

**Constraints**

Previously Observed Laurent's Milkvetch Population (Summer 2011)

Laurent's Milkvetch Observations (Astragalus collinus var. laurentii) (Summer 2019)

ODFW Mule Deer Winter Range

**Raptor Nest Species (2019)**

Ferruginous Hawk

Swainson's Hawk

Burrowing Owl

**0.25 Mile Buffer**

Ferruginous Hawk

Swainson's Hawk

Burrowing Owl

Habitat Categorization

Category 1 - None Mapped

Category 2 - Blue

Category 3 - Green

Category 4 - Orange

Category 5 - None Mapped

Category 6 - Yellow

| Habitat Code | Habitat Description |
|---|---|
| SSA | Shrub-steppe-Basin Big Sagebrush |
| DW | Developed-Dryland Wheat |
| GA | Grassland-Exotic Annual |
| GB | Grassland-Native Perennial |
| DX | Developed-Other |
| SSB | Shrub-steppe-Rabbitbrush/Snakeweed |
| RVG | Developed-Revegetated or Other Planted Grassland |

TETRA TECH

NEXTera ENERGY RESOURCES

1:5,000 WGS 1984 UTM Zone 11N

0 0.125 0.25 0.5 Miles

Not for Construction

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# Figure 2.5

# Wheatridge Renewable Energy Facility II

## Habitat Mitigation Plan

**Temporary and Permanent Impacts by Habitat Category**

**MORROW COUNTY, OR**

- Wheatridge Renewable Energy Facility II Site Boundary
- Impact Area

**Impact Type**

- Permanent
- Temporary

**Constraints**

- Previously Observed Laurent's Milkvetch Population (Summer 2011)
- Laurent's Milkvetch Observations (Astragalus collinus var. laurentii) (Summer 2019)
- ODFW Mule Deer Winter Range

**Raptor Nest Species (2019)**

- Ferruginous Hawk
- Swainson's Hawk
- Burrowing Owl

**0.25 Mile Buffer**

- Ferruginous Hawk
- Swainson's Hawk
- Burrowing Owl

Habitat Categorization

Category 1 - None Mapped

Category 2 - Blue

Category 3 - Green

Category 4 - Orange

Category 5 - None Mapped

Category 6 - Yellow

| Habitat Code | Habitat Description |
|---|---|
| SSA | Shrub-steppe-Basin Big Sagebrush |
| DW | Developed-Dryland Wheat |
| GA | Grassland-Exotic Annual |
| GB | Grassland-Native Perennial |
| DX | Developed-Other |
| SSB | Shrub-steppe-Rabbitbrush/Snakeweed |
| RVG | Developed-Revegetated or Other Planted Grassland |

TETRA TECH

NEXTera ENERGY RESOURCES

1:5,000 WGS 1984 UTM Zone 11N

0 0.125 0.25 0.5 Miles

Not for Construction

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# Figure 2.6

# Wheatridge Renewable Energy Facility II

## Habitat Mitigation Plan

**Temporary and Permanent Impacts by Habitat Category**

**MORROW COUNTY, OR**

GA GA

RVG

RVG RVG

DW

DW

RVG

RVG

DW

DW

DW

DW

DW

DW

- Wheatridge Renewable Energy Facility II Site Boundary
- Impact Area

**Impact Type**

- Permanent
- Temporary

**Constraints**

- Previously Observed Laurent's Milkvetch Population (Summer 2011)
- Laurent's Milkvetch Observations (Astragalus collinus var. laurentii) (Summer 2019)
- ODFW Mule Deer Winter Range

**Raptor Nest Species (2019)**

- Ferruginous Hawk
- Swainson's Hawk
- Burrowing Owl

**0.25 Mile Buffer**

- Ferruginous Hawk
- Swainson's Hawk
- Burrowing Owl

Habitat Categorization

Category 1 - None Mapped

Category 2 - Blue

Category 3 - Green

Category 4 - Orange

Category 5 - None Mapped

Category 6 - Yellow

| Habitat Code | Habitat Description |
|---|---|
| SSA | Shrub-steppe-Basin Big Sagebrush |
| DW | Developed-Dryland Wheat |
| GA | Grassland-Exotic Annual |
| GB | Grassland-Native Perennial |
| DX | Developed-Other |
| SSB | Shrub-steppe-Rabbitbrush/Snakeweed |
| RVG | Developed-Revegetated or Other Planted Grassland |

TETRA TECH

NEXTera ENERGY RESOURCES

1:5,000 WGS 1984 UTM Zone 11N

0 0.125 0.25 0.5 Miles

Not for Construction

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# Figure 2.7

## Wheatridge Renewable Energy Facility II

### Habitat Mitigation Plan

**Temporary and Permanent Impacts by Habitat Category**

**MORROW COUNTY, OR**

DW
DW
DW
DX
DW
DX
DW
DW
DW
DW
DW
DW
DW
GB
RVG
DW

Wheatridge Renewable Energy Facility II Site Boundary
Impact Area

**Impact Type**

Permanent
Temporary

**Constraints**

Previously Observed Laurent's Milkvetch Population (Summer 2011)
Laurent's Milkvetch Observations (Astragalus collinus var. laurentii) (Summer 2019)
ODFW Mule Deer Winter Range

**Raptor Nest Species (2019)**

Ferruginous Hawk
Swainson's Hawk
Burrowing Owl

**0.25 Mile Buffer**

Ferruginous Hawk
Swainson's Hawk
Burrowing Owl

Habitat Categorization
Category 1 - None Mapped
Category 2 - Blue
Category 3 - Green
Category 4 - Orange
Category 5 - None Mapped
Category 6 - Yellow

| Habitat Code | Habitat Description |
|---|---|
| SSA | Shrub-steppe-Basin Big Sagebrush |
| DW | Developed-Dryland Wheat |
| GA | Grassland-Exotic Annual |
| GB | Grassland-Native Perennial |
| DX | Developed-Other |
| SSB | Shrub-steppe-Rabbitbrush/Snakeweed |
| RVG | Developed-Revegetated or Other Planted Grassland |

TETRA TECH

NEXTera ENERGY RESOURCES

1:5,000 WGS 1984 UTM Zone 11N

0 0.125 0.25 0.5 Miles

Not for Construction

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# Figure 2.8

# Wheatridge Renewable Energy Facility II

## Habitat Mitigation Plan

**Temporary and Permanent Impacts by Habitat Category**

**MORROW COUNTY, OR**

DW
DW
DW
DW
DW
DW
DW
RVG
GB
GB

Wheatridge Renewable Energy Facility II Site Boundary
Impact Area

**Impact Type**
Permanent
Temporary

**Constraints**
Previously Observed Laurent's Milkvetch Population (Summer 2011)
Laurent's Milkvetch Observations (Astragalus collinus var. laurentii) (Summer 2019)
ODFW Mule Deer Winter Range

**Raptor Nest Species (2019)**
Ferruginous Hawk
Swainson's Hawk
Burrowing Owl

**0.25 Mile Buffer**
Ferruginous Hawk
Swainson's Hawk
Burrowing Owl

Habitat Categorization
Category 1 - None Mapped
Category 2 - Blue
Category 3 - Green
Category 4 - Orange
Category 5 - None Mapped
Category 6 - Yellow

| Habitat Code | Habitat Description |
|---|---|
| SSA | Shrub-steppe-Basin Big Sagebrush |
| DW | Developed-Dryland Wheat |
| GA | Grassland-Exotic Annual |
| GB | Grassland-Native Perennial |
| DX | Developed-Other |
| SSB | Shrub-steppe-Rabbitbrush/Snakeweed |
| RVG | Developed-Revegetated or Other Planted Grassland |

TETRA TECH

NEXTera ENERGY RESOURCES

1:5,000 WGS 1984 UTM Zone 11N

0 0.125 0.25 0.5 Miles

Not for Construction

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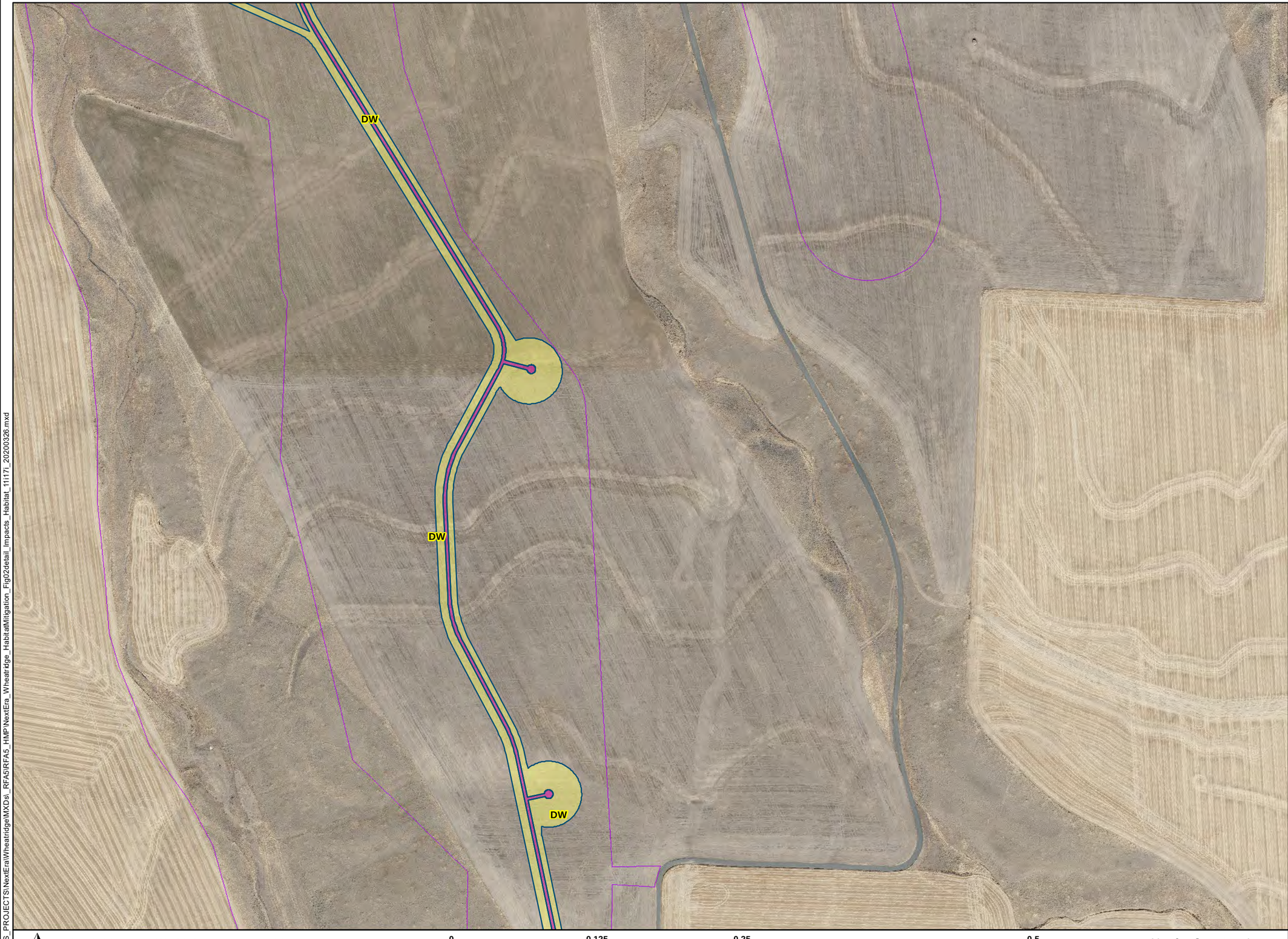


# Figure 2.9

## Wheatridge Renewable Energy Facility II

### Habitat Mitigation Plan

**Temporary and Permanent Impacts by Habitat Category**

**MORROW COUNTY, OR**

Wheatridge Renewable Energy Facility II Site Boundary
Impact Area

**Impact Type**
Permanent
Temporary

**Constraints**
Previously Observed Laurent's Milkvetch Population (Summer 2011)
Laurent's Milkvetch Observations (Astragalus collinus var. laurentii) (Summer 2019)
ODFW Mule Deer Winter Range

**Raptor Nest Species (2019)**
Ferruginous Hawk
Swainson's Hawk
Burrowing Owl

**0.25 Mile Buffer**
Ferruginous Hawk
Swainson's Hawk
Burrowing Owl

Habitat Categorization
Category 1 - None Mapped
Category 2 - Blue
Category 3 - Green
Category 4 - Orange
Category 5 - None Mapped
Category 6 - Yellow

| Habitat Code | Habitat Description |
|---|---|
| SSA | Shrub-steppe-Basin Big Sagebrush |
| DW | Developed-Dryland Wheat |
| GA | Grassland-Exotic Annual |
| GB | Grassland-Native Perennial |
| DX | Developed-Other |
| SSB | Shrub-steppe-Rabbitbrush/Snakeweed |
| RVG | Developed-Revegetated or Other Planted Grassland |

TETRA TECH

NEXTera ENERGY RESOURCES

1:5,000 WGS 1984 UTM Zone 11N

0 0.125 0.25 0.5 Miles

Not for Construction

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# Figure 2.10

# Wheatridge Renewable Energy Facility II

## Habitat Mitigation Plan

**Temporary and Permanent Impacts by Habitat Category**

**MORROW COUNTY, OR**

DW
DW
GB
DW
DW
GB
GB
GB
DW
DW
DW

Wheatridge Renewable Energy Facility II Site Boundary
Impact Area

**Impact Type**

Permanent
Temporary

**Constraints**

Previously Observed Laurent's Milkvetch Population (Summer 2011)
Laurent's Milkvetch Observations (Astragalus collinus var. laurentii) (Summer 2019)
ODFW Mule Deer Winter Range

**Raptor Nest Species (2019)**

Ferruginous Hawk
Swainson's Hawk
Burrowing Owl

**0.25 Mile Buffer**

Ferruginous Hawk
Swainson's Hawk
Burrowing Owl

Habitat Categorization
Category 1 - None Mapped
Category 2 - Blue
Category 3 - Green
Category 4 - Orange
Category 5 - None Mapped
Category 6 - Yellow

| Habitat Code | Habitat Description |
|---|---|
| SSA | Shrub-steppe-Basin Big Sagebrush |
| DW | Developed-Dryland Wheat |
| GA | Grassland-Exotic Annual |
| GB | Grassland-Native Perennial |
| DX | Developed-Other |
| SSB | Shrub-steppe-Rabbitbrush/Snakeweed |
| RVG | Developed-Revegetated or Other Planted Grassland |

TETRA TECH

NEXTera ENERGY RESOURCES

1:5,000 WGS 1984 UTM Zone 11N

0 0.125 0.25 0.5 Miles

Not for Construction

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# Figure 2.11

# Wheatridge Renewable Energy Facility II

## Habitat Mitigation Plan

**Temporary and Permanent Impacts by Habitat Category**

**MORROW COUNTY, OR**

DW
DW
DW
DW
RVG
DX
DW
DW
RVG
RVG
DW
RVG

Wheatridge Renewable Energy Facility II Site Boundary
Impact Area

**Impact Type**
Permanent
Temporary

**Constraints**
Previously Observed Laurent's Milkvetch Population (Summer 2011)
Laurent's Milkvetch Observations (Astragalus collinus var. laurentii) (Summer 2019)
ODFW Mule Deer Winter Range

**Raptor Nest Species (2019)**
Ferruginous Hawk
Swainson's Hawk
Burrowing Owl

**0.25 Mile Buffer**
Ferruginous Hawk
Swainson's Hawk
Burrowing Owl

Habitat Categorization
Category 1 - None Mapped
Category 2 - Blue
Category 3 - Green
Category 4 - Orange
Category 5 - None Mapped
Category 6 - Yellow

| Habitat Code | Habitat Description |
|---|---|
| SSA | Shrub-steppe-Basin Big Sagebrush |
| DW | Developed-Dryland Wheat |
| GA | Grassland-Exotic Annual |
| GB | Grassland-Native Perennial |
| DX | Developed-Other |
| SSB | Shrub-steppe-Rabbitbrush/Snakeweed |
| RVG | Developed-Revegetated or Other Planted Grassland |

TETRA TECH

NEXTera ENERGY RESOURCES

1:5,000 WGS 1984 UTM Zone 11N

0 0.125 0.25 0.5 Miles

Not for Construction

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# Figure 2.12

# Wheatridge Renewable Energy Facility II

## Habitat Mitigation Plan

**Temporary and Permanent Impacts by Habitat Category**

**MORROW COUNTY, OR**

DW
DW
DW
DW
RVG
RVG
DW
RVG

Wheatridge Renewable Energy Facility II Site Boundary
Impact Area

**Impact Type**
Permanent
Temporary

**Constraints**
Previously Observed Laurent's Milkvetch Population (Summer 2011)
Laurent's Milkvetch Observations (Astragalus collinus var. laurentii) (Summer 2019)
ODFW Mule Deer Winter Range

**Raptor Nest Species (2019)**
Ferruginous Hawk
Swainson's Hawk
Burrowing Owl

**0.25 Mile Buffer**
Ferruginous Hawk
Swainson's Hawk
Burrowing Owl

Habitat Categorization
Category 1 - None Mapped
Category 2 - Blue
Category 3 - Green
Category 4 - Orange
Category 5 - None Mapped
Category 6 - Yellow

| Habitat Code | Habitat Description |
|---|---|
| SSA | Shrub-steppe-Basin Big Sagebrush |
| DW | Developed-Dryland Wheat |
| GA | Grassland-Exotic Annual |
| GB | Grassland-Native Perennial |
| DX | Developed-Other |
| SSB | Shrub-steppe-Rabbitbrush/Snakeweed |
| RVG | Developed-Revegetated or Other Planted Grassland |

TETRA TECH

NEXTera ENERGY RESOURCES

1:5,000 WGS 1984 UTM Zone 11N

0 0.125 0.25 0.5 Miles

Not for Construction

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# Figure 2.13

# Wheatridge Renewable Energy Facility II

## Habitat Mitigation Plan

**Temporary and Permanent Impacts by Habitat Category**

**MORROW COUNTY, OR**

DW
RVG
DW
RVG
DW
DW
DW
RVG
RVG
DW
DW
DW

Wheatridge Renewable Energy Facility II Site Boundary
Impact Area

**Impact Type**
Permanent
Temporary

**Constraints**
Previously Observed Laurent's Milkvetch Population (Summer 2011)
Laurent's Milkvetch Observations (Astragalus collinus var. laurentii) (Summer 2019)
ODFW Mule Deer Winter Range

**Raptor Nest Species (2019)**
Ferruginous Hawk
Swainson's Hawk
Burrowing Owl

**0.25 Mile Buffer**
Ferruginous Hawk
Swainson's Hawk
Burrowing Owl

Habitat Categorization
Category 1 - None Mapped
Category 2 - Blue
Category 3 - Green
Category 4 - Orange
Category 5 - None Mapped
Category 6 - Yellow

| Habitat Code | Habitat Description |
|---|---|
| SSA | Shrub-steppe-Basin Big Sagebrush |
| DW | Developed-Dryland Wheat |
| GA | Grassland-Exotic Annual |
| GB | Grassland-Native Perennial |
| DX | Developed-Other |
| SSB | Shrub-steppe-Rabbitbrush/Snakeweed |
| RVG | Developed-Revegetated or Other Planted Grassland |

TETRA TECH

NEXTera ENERGY RESOURCES

1:5,000 WGS 1984 UTM Zone 11N

0 0.125 0.25 0.5 Miles

Not for Construction

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# Figure 2.14

# Wheatridge Renewable Energy Facility II

## Habitat Mitigation Plan

**Temporary and Permanent Impacts by Habitat Category**

**MORROW COUNTY, OR**

DW

RVG

RVG

RVG

RVG

RVG

RVG

DW DW

Wheatridge Renewable Energy Facility II Site Boundary

Impact Area

**Impact Type**

Permanent

Temporary

**Constraints**

Previously Observed Laurent's Milkvetch Population (Summer 2011)

Laurent's Milkvetch Observations (Astragalus collinus var. laurentii) (Summer 2019)

ODFW Mule Deer Winter Range

**Raptor Nest Species (2019)**

Ferruginous Hawk

Swainson's Hawk

Burrowing Owl

**0.25 Mile Buffer**

Ferruginous Hawk

Swainson's Hawk

Burrowing Owl

Habitat Categorization

Category 1 - None Mapped

Category 2 - Blue

Category 3 - Green

Category 4 - Orange

Category 5 - None Mapped

Category 6 - Yellow

| Habitat Code | Habitat Description |
|---|---|
| SSA | Shrub-steppe-Basin Big Sagebrush |
| DW | Developed-Dryland Wheat |
| GA | Grassland-Exotic Annual |
| GB | Grassland-Native Perennial |
| DX | Developed-Other |
| SSB | Shrub-steppe-Rabbitbrush/Snakeweed |
| RVG | Developed-Revegetated or Other Planted Grassland |

1:5,000 WGS 1984 UTM Zone 11N

0 0.125 0.25 0.5 Miles

Not for Construction

TETRA TECH

NEXTera ENERGY RESOURCES

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# Figure 2.15

## Wheatridge Renewable Energy Facility II

### Habitat Mitigation Plan

**Temporary and Permanent Impacts by Habitat Category**

**MORROW COUNTY, OR**

- Wheatridge Renewable Energy Facility II Site Boundary
- Impact Area

**Impact Type**

- Permanent
- Temporary

**Constraints**

- Previously Observed Laurent's Milkvetch Population (Summer 2011)
- Laurent's Milkvetch Observations (Astragalus collinus var. laurentii) (Summer 2019)
- ODFW Mule Deer Winter Range

**Raptor Nest Species (2019)**

- Ferruginous Hawk
- Swainson's Hawk
- Burrowing Owl

**0.25 Mile Buffer**

- Ferruginous Hawk
- Swainson's Hawk
- Burrowing Owl

Habitat Categorization

Category 1 - None Mapped

Category 2 - Blue

Category 3 - Green

Category 4 - Orange

Category 5 - None Mapped

Category 6 - Yellow

| Habitat Code | Habitat Description |
|---|---|
| SSA | Shrub-steppe-Basin Big Sagebrush |
| DW | Developed-Dryland Wheat |
| GA | Grassland-Exotic Annual |
| GB | Grassland-Native Perennial |
| DX | Developed-Other |
| SSB | Shrub-steppe-Rabbitbrush/Snakeweed |
| RVG | Developed-Revegetated or Other Planted Grassland |

TETRA TECH

NEXTera ENERGY RESOURCES

1:5,000 WGS 1984 UTM Zone 11N

0 0.125 0.25 0.5 Miles

Not for Construction

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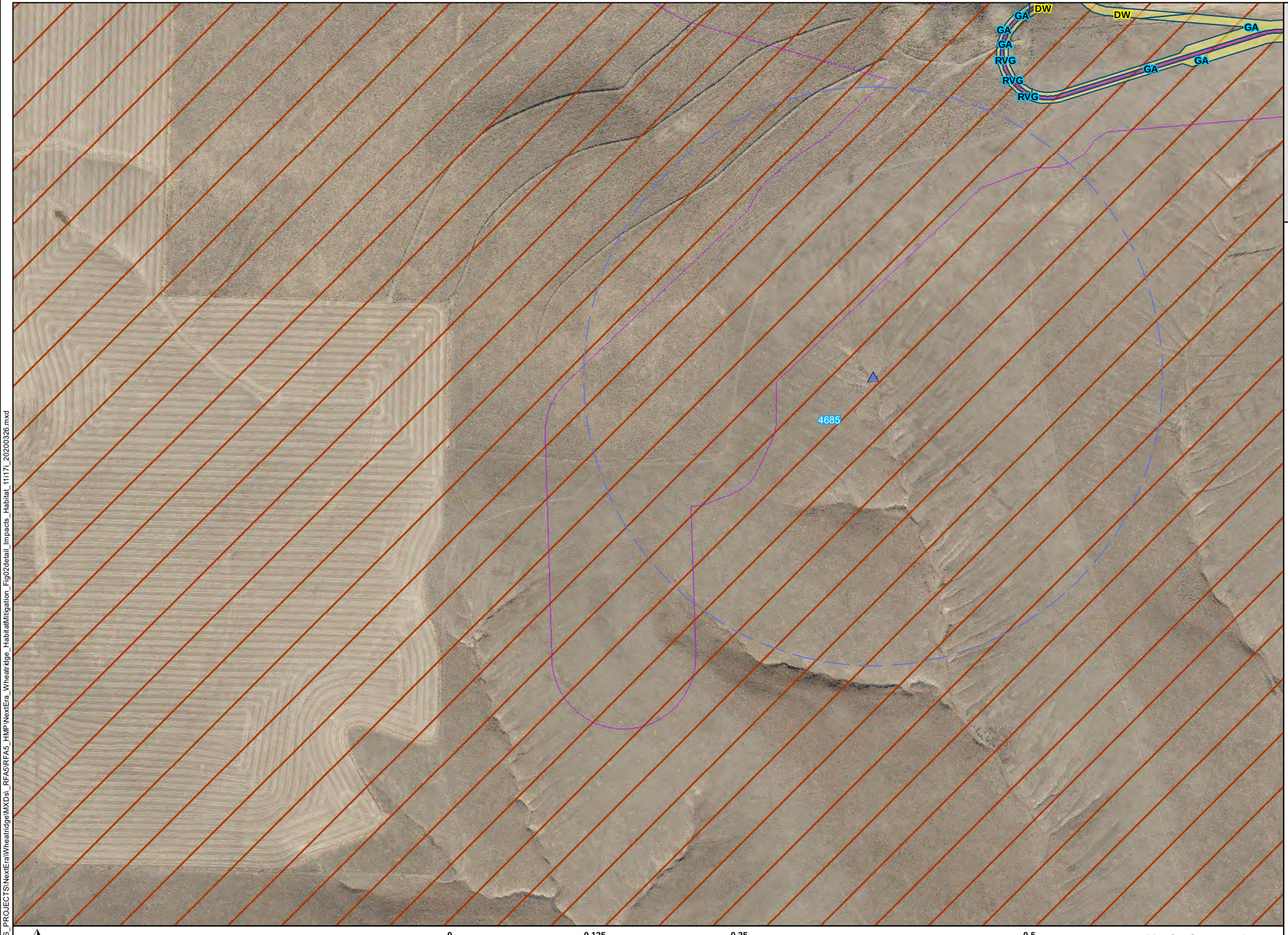


# Figure 2.16

## Wheatridge Renewable Energy Facility II

### Habitat Mitigation Plan

**Temporary and Permanent Impacts by Habitat Category**

**MORROW COUNTY, OR**

Wheatridge Renewable Energy Facility II Site Boundary

Impact Area

**Impact Type**

Permanent

Temporary

**Constraints**

Previously Observed Laurent's Milkvetch Population (Summer 2011)

Laurent's Milkvetch Observations (Astragalus collinus var. laurentii) (Summer 2019)

ODFW Mule Deer Winter Range

**Raptor Nest Species (2019)**

Ferruginous Hawk

Swainson's Hawk

Burrowing Owl

**0.25 Mile Buffer**

Ferruginous Hawk

Swainson's Hawk

Burrowing Owl

Habitat Categorization

Category 1 - None Mapped

Category 2 - Blue

Category 3 - Green

Category 4 - Orange

Category 5 - None Mapped

Category 6 - Yellow

| Habitat Code | Habitat Description |
|---|---|
| SSA | Shrub-steppe-Basin Big Sagebrush |
| DW | Developed-Dryland Wheat |
| GA | Grassland-Exotic Annual |
| GB | Grassland-Native Perennial |
| DX | Developed-Other |
| SSB | Shrub-steppe-Rabbitbrush/Snakeweed |
| RVG | Developed-Revegetated or Other Planted Grassland |

TETRA TECH

NEXTera ENERGY RESOURCES

1:5,000 WGS 1984 UTM Zone 11N

0 0.125 0.25 0.5 Miles

Not for Construction

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# Figure 2.17

# Wheatridge Renewable Energy Facility II

## Habitat Mitigation Plan

**Temporary and Permanent Impacts by Habitat Category**

**MORROW COUNTY, OR**

DW
DW
GB
DW
GA
GA

Wheatridge Renewable Energy Facility II Site Boundary
Impact Area

**Impact Type**
Permanent
Temporary

**Constraints**
Previously Observed Laurent's Milkvetch Population (Summer 2011)
Laurent's Milkvetch Observations (Astragalus collinus var. laurentii) (Summer 2019)
ODFW Mule Deer Winter Range

**Raptor Nest Species (2019)**
Ferruginous Hawk
Swainson's Hawk
Burrowing Owl

**0.25 Mile Buffer**
Ferruginous Hawk
Swainson's Hawk
Burrowing Owl

Habitat Categorization
Category 1 - None Mapped
Category 2 - Blue
Category 3 - Green
Category 4 - Orange
Category 5 - None Mapped
Category 6 - Yellow

| Habitat Code | Habitat Description |
|---|---|
| SSA | Shrub-steppe-Basin Big Sagebrush |
| DW | Developed-Dryland Wheat |
| GA | Grassland-Exotic Annual |
| GB | Grassland-Native Perennial |
| DX | Developed-Other |
| SSB | Shrub-steppe-Rabbitbrush/Snakeweed |
| RVG | Developed-Revegetated or Other Planted Grassland |

TETRA TECH

NEXTera ENERGY RESOURCES

1:5,000 WGS 1984 UTM Zone 11N

0 0.125 0.25 0.5 Miles

Not for Construction

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# Figure 2.18

# Wheatridge Renewable Energy Facility II

## Habitat Mitigation Plan

**Temporary and Permanent Impacts by Habitat Category**

**MORROW COUNTY, OR**

DW
DW
DW
DW
DW
DW
DW
SSB
SSB
GA
DW
DW
GA
DW
DW
GB
GB

- Wheatridge Renewable Energy Facility II Site Boundary
- Impact Area

**Impact Type**

- Permanent
- Temporary

**Constraints**

- Previously Observed Laurent's Milkvetch Population (Summer 2011)
- Laurent's Milkvetch Observations (Astragalus collinus var. laurentii) (Summer 2019)
- ODFW Mule Deer Winter Range

**Raptor Nest Species (2019)**

- Ferruginous Hawk
- Swainson's Hawk
- Burrowing Owl

**0.25 Mile Buffer**

- Ferruginous Hawk
- Swainson's Hawk
- Burrowing Owl

Habitat Categorization

Category 1 - None Mapped

Category 2 - Blue

Category 3 - Green

Category 4 - Orange

Category 5 - None Mapped

Category 6 - Yellow

| Habitat Code | Habitat Description |
|---|---|
| SSA | Shrub-steppe-Basin Big Sagebrush |
| DW | Developed-Dryland Wheat |
| GA | Grassland-Exotic Annual |
| GB | Grassland-Native Perennial |
| DX | Developed-Other |
| SSB | Shrub-steppe-Rabbitbrush/Snakeweed |
| RVG | Developed-Revegetated or Other Planted Grassland |

TETRA TECH

NEXTera ENERGY RESOURCES

1:5,000 WGS 1984 UTM Zone 11N

0 0.125 0.25 0.5 Miles

Not for Construction

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# Figure 2.19

## Wheatridge Renewable Energy Facility II

### Habitat Mitigation Plan

**Temporary and Permanent Impacts by Habitat Category**

**MORROW COUNTY, OR**

RVG
DW
DW
GB
RVG
GB
DW
GB
GB
GB
GB

Wheatridge Renewable Energy Facility II Site Boundary
Impact Area

**Impact Type**
Permanent
Temporary

**Constraints**
Previously Observed Laurent's Milkvetch Population (Summer 2011)
Laurent's Milkvetch Observations (Astragalus collinus var. laurentii) (Summer 2019)
ODFW Mule Deer Winter Range

**Raptor Nest Species (2019)**
Ferruginous Hawk
Swainson's Hawk
Burrowing Owl

**0.25 Mile Buffer**
Ferruginous Hawk
Swainson's Hawk
Burrowing Owl

Habitat Categorization
Category 1 - None Mapped
Category 2 - Blue
Category 3 - Green
Category 4 - Orange
Category 5 - None Mapped
Category 6 - Yellow

| Habitat Code | Habitat Description |
|---|---|
| SSA | Shrub-steppe-Basin Big Sagebrush |
| DW | Developed-Dryland Wheat |
| GA | Grassland-Exotic Annual |
| GB | Grassland-Native Perennial |
| DX | Developed-Other |
| SSB | Shrub-steppe-Rabbitbrush/Snakeweed |
| RVG | Developed-Revegetated or Other Planted Grassland |

TETRA TECH

NEXTera ENERGY RESOURCES

1:5,000 WGS 1984 UTM Zone 11N

0 0.125 0.25 0.5 Miles

Not for Construction

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# Figure 2.20

# Wheatridge Renewable Energy Facility II

## Habitat Mitigation Plan

**Temporary and Permanent Impacts by Habitat Category**

**MORROW COUNTY, OR**

Wheatridge Renewable Energy Facility II Site Boundary
Impact Area

**Impact Type**
Permanent
Temporary

**Constraints**
Previously Observed Laurent's Milkvetch Population (Summer 2011)
Laurent's Milkvetch Observations (Astragalus collinus var. laurentii) (Summer 2019)
ODFW Mule Deer Winter Range

**Raptor Nest Species (2019)**
Ferruginous Hawk
Swainson's Hawk
Burrowing Owl

**0.25 Mile Buffer**
Ferruginous Hawk
Swainson's Hawk
Burrowing Owl

Habitat Categorization
Category 1 - None Mapped
Category 2 - Blue
Category 3 - Green
Category 4 - Orange
Category 5 - None Mapped
Category 6 - Yellow

| Habitat Code | Habitat Description |
|---|---|
| SSA | Shrub-steppe-Basin Big Sagebrush |
| DW | Developed-Dryland Wheat |
| GA | Grassland-Exotic Annual |
| GB | Grassland-Native Perennial |
| DX | Developed-Other |
| SSB | Shrub-steppe-Rabbitbrush/Snakeweed |
| RVG | Developed-Revegetated or Other Planted Grassland |

TETRA TECH

NEXTera ENERGY RESOURCES

1:5,000 WGS 1984 UTM Zone 11N

0 0.125 0.25 0.5 Miles

Not for Construction

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# Figure 2.21

# Wheatridge Renewable Energy Facility II

## Habitat Mitigation Plan

**Temporary and Permanent Impacts by Habitat Category**

**MORROW COUNTY, OR**

Wheatridge Renewable Energy Facility II Site Boundary

Impact Area

**Impact Type**

Permanent

Temporary

**Constraints**

Previously Observed Laurent's Milkvetch Population (Summer 2011)

Laurent's Milkvetch Observations (Astragalus collinus var. laurentii) (Summer 2019)

ODFW Mule Deer Winter Range

**Raptor Nest Species (2019)**

Ferruginous Hawk

Swainson's Hawk

Burrowing Owl

**0.25 Mile Buffer**

Ferruginous Hawk

Swainson's Hawk

Burrowing Owl

Habitat Categorization

Category 1 - None Mapped

Category 2 - Blue

Category 3 - Green

Category 4 - Orange

Category 5 - None Mapped

Category 6 - Yellow

| Habitat Code | Habitat Description |
|---|---|
| SSA | Shrub-steppe-Basin Big Sagebrush |
| DW | Developed-Dryland Wheat |
| GA | Grassland-Exotic Annual |
| GB | Grassland-Native Perennial |
| DX | Developed-Other |
| SSB | Shrub-steppe-Rabbitbrush/Snakeweed |
| RVG | Developed-Revegetated or Other Planted Grassland |

TETRA TECH

NEXTera ENERGY RESOURCES

1:5,000 WGS 1984 UTM Zone 11N

0 0.125 0.25 0.5 Miles

Not for Construction

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# Figure 2.22

# Wheatridge Renewable Energy Facility II

## Habitat Mitigation Plan

**Temporary and Permanent Impacts by Habitat Category**

**MORROW COUNTY, OR**

GA
DW
GB
GB
DW
DW
DW
DW
DW
GA

Wheatridge Renewable Energy Facility II Site Boundary
Impact Area

**Impact Type**
Permanent
Temporary

**Constraints**
Previously Observed Laurent's Milkvetch Population (Summer 2011)
Laurent's Milkvetch Observations (Astragalus collinus var. laurentii) (Summer 2019)
ODFW Mule Deer Winter Range

**Raptor Nest Species (2019)**
Ferruginous Hawk
Swainson's Hawk
Burrowing Owl

**0.25 Mile Buffer**
Ferruginous Hawk
Swainson's Hawk
Burrowing Owl

Habitat Categorization
Category 1 - None Mapped
Category 2 - Blue
Category 3 - Green
Category 4 - Orange
Category 5 - None Mapped
Category 6 - Yellow

| Habitat Code | Habitat Description |
|---|---|
| SSA | Shrub-steppe-Basin Big Sagebrush |
| DW | Developed-Dryland Wheat |
| GA | Grassland-Exotic Annual |
| GB | Grassland-Native Perennial |
| DX | Developed-Other |
| SSB | Shrub-steppe-Rabbitbrush/Snakeweed |
| RVG | Developed-Revegetated or Other Planted Grassland |

TETRA TECH

NEXTera ENERGY RESOURCES

1:5,000 WGS 1984 UTM Zone 11N

0 0.125 0.25 0.5 Miles

Not for Construction

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# Figure 2.23

## Wheatridge Renewable Energy Facility II

### Habitat Mitigation Plan

**Temporary and Permanent Impacts by Habitat Category**

**MORROW COUNTY, OR**

GA
DW
DW
DW
DW
GB
GB
GB
GB
GB
GB
GB
GB
GB
GB
GA
GA
GB
GB
GB
GB
GB

Wheatridge Renewable Energy Facility II Site Boundary
Impact Area

**Impact Type**
Permanent
Temporary

**Constraints**
Previously Observed Laurent's Milkvetch Population (Summer 2011)
Laurent's Milkvetch Observations (Astragalus collinus var. laurentii) (Summer 2019)
ODFW Mule Deer Winter Range

**Raptor Nest Species (2019)**
Ferruginous Hawk
Swainson's Hawk
Burrowing Owl

**0.25 Mile Buffer**
Ferruginous Hawk
Swainson's Hawk
Burrowing Owl

Habitat Categorization
Category 1 - None Mapped
Category 2 - Blue
Category 3 - Green
Category 4 - Orange
Category 5 - None Mapped
Category 6 - Yellow

| Habitat Code | Habitat Description |
|---|---|
| SSA | Shrub-steppe-Basin Big Sagebrush |
| DW | Developed-Dryland Wheat |
| GA | Grassland-Exotic Annual |
| GB | Grassland-Native Perennial |
| DX | Developed-Other |
| SSB | Shrub-steppe-Rabbitbrush/Snakeweed |
| RVG | Developed-Revegetated or Other Planted Grassland |

TETRA TECH

NEXTera ENERGY RESOURCES

1:5,000 WGS 1984 UTM Zone 11N

0 0.125 0.25 0.5 Miles

Not for Construction

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# Figure 2.24

# Wheatridge Renewable Energy Facility II

## Habitat Mitigation Plan

**Temporary and Permanent Impacts by Habitat Category**

**MORROW COUNTY, OR**

RVG
RVG
RVG
DW
DW
DW
RVG
RVG
RVG
DW
DW
DW
DW
DW
RVG
RVG
RVG
DW
DW
GB
GB
GB
DW
DW

- Wheatridge Renewable Energy Facility II Site Boundary
- Impact Area

**Impact Type**

- Permanent
- Temporary

**Constraints**

- Previously Observed Laurent's Milkvetch Population (Summer 2011)
- Laurent's Milkvetch Observations (Astragalus collinus var. laurentii) (Summer 2019)
- ODFW Mule Deer Winter Range

**Raptor Nest Species (2019)**

- Ferruginous Hawk
- Swainson's Hawk
- Burrowing Owl

**0.25 Mile Buffer**

- Ferruginous Hawk
- Swainson's Hawk
- Burrowing Owl

Habitat Categorization

Category 1 - None Mapped

Category 2 - Blue

Category 3 - Green

Category 4 - Orange

Category 5 - None Mapped

Category 6 - Yellow

| Habitat Code | Habitat Description |
|---|---|
| SSA | Shrub-steppe-Basin Big Sagebrush |
| DW | Developed-Dryland Wheat |
| GA | Grassland-Exotic Annual |
| GB | Grassland-Native Perennial |
| DX | Developed-Other |
| SSB | Shrub-steppe-Rabbitbrush/Snakeweed |
| RVG | Developed-Revegetated or Other Planted Grassland |

TETRA TECH

NEXTera ENERGY RESOURCES

1:5,000 WGS 1984 UTM Zone 11N

0 0.125 0.25 0.5 Miles

Not for Construction

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# Figure 2.25

# Wheatridge Renewable Energy Facility II

## Habitat Mitigation Plan

**Temporary and Permanent Impacts by Habitat Category**

**MORROW COUNTY, OR**

Wheatridge Renewable Energy Facility II Site Boundary

Impact Area

**Impact Type**

Permanent

Temporary

**Constraints**

Previously Observed Laurent's Milkvetch Population (Summer 2011)

Laurent's Milkvetch Observations (Astragalus collinus var. laurentii) (Summer 2019)

ODFW Mule Deer Winter Range

**Raptor Nest Species (2019)**

Ferruginous Hawk

Swainson's Hawk

Burrowing Owl

**0.25 Mile Buffer**

Ferruginous Hawk

Swainson's Hawk

Burrowing Owl

Habitat Categorization

Category 1 - None Mapped

Category 2 - Blue

Category 3 - Green

Category 4 - Orange

Category 5 - None Mapped

Category 6 - Yellow

| Habitat Code | Habitat Description |
|---|---|
| SSA | Shrub-steppe-Basin Big Sagebrush |
| DW | Developed-Dryland Wheat |
| GA | Grassland-Exotic Annual |
| GB | Grassland-Native Perennial |
| DX | Developed-Other |
| SSB | Shrub-steppe-Rabbitbrush/Snakeweed |
| RVG | Developed-Revegetated or Other Planted Grassland |

TETRA TECH

NEXTera ENERGY RESOURCES

1:5,000 WGS 1984 UTM Zone 11N

0 0.125 0.25 0.5 Miles

Not for Construction

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# Figure 2.26

# Wheatridge Renewable Energy Facility II

## Habitat Mitigation Plan

**Temporary and Permanent Impacts by Habitat Category**

**MORROW COUNTY, OR**

RVG
RVG
GA
RVG
DW
DW
RVG
RVG
RVG

- Wheatridge Renewable Energy Facility II Site Boundary
- Impact Area

**Impact Type**

- Permanent
- Temporary

**Constraints**

- Previously Observed Laurent's Milkvetch Population (Summer 2011)
- Laurent's Milkvetch Observations (Astragalus collinus var. laurentii) (Summer 2019)
- ODFW Mule Deer Winter Range

**Raptor Nest Species (2019)**

- Ferruginous Hawk
- Swainson's Hawk
- Burrowing Owl

**0.25 Mile Buffer**

- Ferruginous Hawk
- Swainson's Hawk
- Burrowing Owl

Habitat Categorization

Category 1 - None Mapped

Category 2 - Blue

Category 3 - Green

Category 4 - Orange

Category 5 - None Mapped

Category 6 - Yellow

| Habitat Code | Habitat Description |
|---|---|
| SSA | Shrub-steppe-Basin Big Sagebrush |
| DW | Developed-Dryland Wheat |
| GA | Grassland-Exotic Annual |
| GB | Grassland-Native Perennial |
| DX | Developed-Other |
| SSB | Shrub-steppe-Rabbitbrush/Snakeweed |
| RVG | Developed-Revegetated or Other Planted Grassland |

TETRA TECH

NEXTera ENERGY RESOURCES

1:5,000 WGS 1984 UTM Zone 11N

0 0.125 0.25 0.5 Miles

Not for Construction

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# Figure 2.27

# Wheatridge Renewable Energy Facility II

## Habitat Mitigation Plan

**Temporary and Permanent Impacts by Habitat Category**

**MORROW COUNTY, OR**

Wheatridge Renewable Energy Facility II Site Boundary

Impact Area

**Impact Type**

Permanent

Temporary

**Constraints**

Previously Observed Laurent's Milkvetch Population (Summer 2011)

Laurent's Milkvetch Observations (Astragalus collinus var. laurentii) (Summer 2019)

ODFW Mule Deer Winter Range

**Raptor Nest Species (2019)**

Ferruginous Hawk

Swainson's Hawk

Burrowing Owl

**0.25 Mile Buffer**

Ferruginous Hawk

Swainson's Hawk

Burrowing Owl

Habitat Categorization

Category 1 - None Mapped

Category 2 - Blue

Category 3 - Green

Category 4 - Orange

Category 5 - None Mapped

Category 6 - Yellow

| Habitat Code | Habitat Description |
|---|---|
| SSA | Shrub-steppe-Basin Big Sagebrush |
| DW | Developed-Dryland Wheat |
| GA | Grassland-Exotic Annual |
| GB | Grassland-Native Perennial |
| DX | Developed-Other |
| SSB | Shrub-steppe-Rabbitbrush/Snakeweed |
| RVG | Developed-Revegetated or Other Planted Grassland |

TETRA TECH

NEXTera ENERGY RESOURCES

1:5,000 WGS 1984 UTM Zone 11N

0 0.125 0.25 0.5 Miles

Not for Construction

P:\GIS_PROJECTS\NextEraWheatridgeMXDs_RFA5IRFA5_HMP\NextEra_Wheatridge_HabitatMitigation_Fig02detail_Impacts_Habitat_11i17i_20200326.mxd

# Figure 2.28

# Wheatridge Renewable Energy Facility II

## Habitat Mitigation Plan

**Temporary and Permanent Impacts by Habitat Category**

**MORROW COUNTY, OR**

RVG

RVG

RVG

Wheatridge Renewable Energy Facility II Site Boundary

Impact Area

**Impact Type**

Permanent

Temporary

**Constraints**

Previously Observed Laurent's Milkvetch Population (Summer 2011)

Laurent's Milkvetch Observations (Astragalus collinus var. laurentii) (Summer 2019)

ODFW Mule Deer Winter Range

**Raptor Nest Species (2019)**

Ferruginous Hawk

Swainson's Hawk

Burrowing Owl

**0.25 Mile Buffer**

Ferruginous Hawk

Swainson's Hawk

Burrowing Owl

Habitat Categorization

Category 1 - None Mapped

Category 2 - Blue

Category 3 - Green

Category 4 - Orange

Category 5 - None Mapped

Category 6 - Yellow

| Habitat Code | Habitat Description |
|---|---|
| SSA | Shrub-steppe-Basin Big Sagebrush |
| DW | Developed-Dryland Wheat |
| GA | Grassland-Exotic Annual |
| GB | Grassland-Native Perennial |
| DX | Developed-Other |
| SSB | Shrub-steppe-Rabbitbrush/Snakeweed |
| RVG | Developed-Revegetated or Other Planted Grassland |

TETRA TECH

NEXTera ENERGY RESOURCES

1:5,000 WGS 1984 UTM Zone 11N

0 0.125 0.25 0.5 Miles

Not for Construction

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# Figure 2.29

# Wheatridge Renewable Energy Facility II

## Habitat Mitigation Plan

**Temporary and Permanent Impacts by Habitat Category**

**MORROW COUNTY, OR**

RVG

RVG

RVG

3789

Wheatridge Renewable Energy Facility II Site Boundary

Impact Area

**Impact Type**

Permanent

Temporary

**Constraints**

Previously Observed Laurent's Milkvetch Population (Summer 2011)

Laurent's Milkvetch Observations (Astragalus collinus var. laurentii) (Summer 2019)

ODFW Mule Deer Winter Range

**Raptor Nest Species (2019)**

Ferruginous Hawk

Swainson's Hawk

Burrowing Owl

**0.25 Mile Buffer**

Ferruginous Hawk

Swainson's Hawk

Burrowing Owl

Habitat Categorization

Category 1 - None Mapped

Category 2 - Blue

Category 3 - Green

Category 4 - Orange

Category 5 - None Mapped

Category 6 - Yellow

| Habitat Code | Habitat Description |
|---|---|
| SSA | Shrub-steppe-Basin Big Sagebrush |
| DW | Developed-Dryland Wheat |
| GA | Grassland-Exotic Annual |
| GB | Grassland-Native Perennial |
| DX | Developed-Other |
| SSB | Shrub-steppe-Rabbitbrush/Snakeweed |
| RVG | Developed-Revegetated or Other Planted Grassland |

1:5,000 WGS 1984 UTM Zone 11N

0 0.125 0.25 0.5 Miles

Not for Construction

TETRA TECH

NEXTera ENERGY RESOURCES

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# Figure 2.30

# Wheatridge Renewable Energy Facility II

## Habitat Mitigation Plan

### Temporary and Permanent Impacts by Habitat Category

**MORROW COUNTY, OR**

RVG
RVG
RVG
DW
DW
DW
RVG
RVG
RVG
RVG
RVG
RVG
3789

- Wheatridge Renewable Energy Facility II Site Boundary
- Impact Area

**Impact Type**

- Permanent
- Temporary

**Constraints**

- Previously Observed Laurent's Milkvetch Population (Summer 2011)
- Laurent's Milkvetch Observations (Astragalus collinus var. laurentii) (Summer 2019)
- ODFW Mule Deer Winter Range

**Raptor Nest Species (2019)**

- Ferruginous Hawk
- Swainson's Hawk
- Burrowing Owl

**0.25 Mile Buffer**

- Ferruginous Hawk
- Swainson's Hawk
- Burrowing Owl

Habitat Categorization

- Category 1 - None Mapped
- Category 2 - Blue
- Category 3 - Green
- Category 4 - Orange
- Category 5 - None Mapped
- Category 6 - Yellow

| Habitat Code | Habitat Description |
|---|---|
| SSA | Shrub-steppe-Basin Big Sagebrush |
| DW | Developed-Dryland Wheat |
| GA | Grassland-Exotic Annual |
| GB | Grassland-Native Perennial |
| DX | Developed-Other |
| SSB | Shrub-steppe-Rabbitbrush/Snakeweed |
| RVG | Developed-Revegetated or Other Planted Grassland |

TETRA TECH

NEXTera ENERGY RESOURCES

1:5,000 WGS 1984 UTM Zone 11N

0 0.125 0.25 0.5 Miles

Not for Construction

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# Figure 2.31

# Wheatridge Renewable Energy Facility II

## Habitat Mitigation Plan

**Temporary and Permanent Impacts by Habitat Category**

**MORROW COUNTY, OR**

3789

RVG

RVG

GA

GA

RVG

RVG

RVG

- Wheatridge Renewable Energy Facility II Site Boundary
- Impact Area

**Impact Type**

- Permanent
- Temporary

**Constraints**

- Previously Observed Laurent's Milkvetch Population (Summer 2011)
- Laurent's Milkvetch Observations (Astragalus collinus var. laurentii) (Summer 2019)
- ODFW Mule Deer Winter Range

**Raptor Nest Species (2019)**

- Ferruginous Hawk
- Swainson's Hawk
- Burrowing Owl

**0.25 Mile Buffer**

- Ferruginous Hawk
- Swainson's Hawk
- Burrowing Owl

Habitat Categorization

- Category 1 - None Mapped
- Category 2 - Blue
- Category 3 - Green
- Category 4 - Orange
- Category 5 - None Mapped
- Category 6 - Yellow

| Habitat Code | Habitat Description |
|---|---|
| SSA | Shrub-steppe-Basin Big Sagebrush |
| DW | Developed-Dryland Wheat |
| GA | Grassland-Exotic Annual |
| GB | Grassland-Native Perennial |
| DX | Developed-Other |
| SSB | Shrub-steppe-Rabbitbrush/Snakeweed |
| RVG | Developed-Revegetated or Other Planted Grassland |

TETRA TECH

NEXTera ENERGY RESOURCES

1:5,000 WGS 1984 UTM Zone 11N

0 0.125 0.25 0.5 Miles

Not for Construction

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RVG

RVG

RVG

P:\GIS_PROJECTS\NextEra\WheatridgeMXDs_RFA5\RFA5_HMP\NextEra_Wheatridge_HabitatMitigation_Fig02detail_Impacts_Habitat_11i17i_20200326.mxd

1:5,000 WGS 1984 UTM Zone 11N

0 0.125 0.25 0.5 Miles

Not for Construction

# Figure 2.32

## Wheatridge Renewable Energy Facility II

### Habitat Mitigation Plan

**Temporary and Permanent Impacts by Habitat Category**

**MORROW COUNTY, OR**

Wheatridge Renewable Energy Facility II Site Boundary

Impact Area

**Impact Type**

Permanent

Temporary

**Constraints**

Previously Observed Laurent's Milkvetch Population (Summer 2011)

Laurent's Milkvetch Observations (Astragalus collinus var. laurentii) (Summer 2019)

ODFW Mule Deer Winter Range

**Raptor Nest Species (2019)**

Ferruginous Hawk

Swainson's Hawk

Burrowing Owl

**0.25 Mile Buffer**

Ferruginous Hawk

Swainson's Hawk

Burrowing Owl

Habitat Categorization

Category 1 - None Mapped

Category 2 - Blue

Category 3 - Green

Category 4 - Orange

Category 5 - None Mapped

Category 6 - Yellow

| Habitat Code | Habitat Description |
|---|---|
| SSA | Shrub-steppe-Basin Big Sagebrush |
| DW | Developed-Dryland Wheat |
| GA | Grassland-Exotic Annual |
| GB | Grassland-Native Perennial |
| DX | Developed-Other |
| SSB | Shrub-steppe-Rabbitbrush/Snakeweed |
| RVG | Developed-Revegetated or Other Planted Grassland |

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Figure 3

# Wheatridge Renewable Energy Facility I and II

## Habitat Mitigation Plan

### Overview - Habitat Mitigation Area

GILLIAM AND MORROW COUNTY, OR

Cecil

Olex

Ione

Lexington

Heppner

Gilliam County

Morrow County

- Wheatridge Renewable Energy Facility I Site Boundary
- Wheatridge Renewable Energy Facility II Site Boundary
- Habitat Mitigation Area
- ODFW Mule Deer Winter Range
- City/Town
- County Boundary

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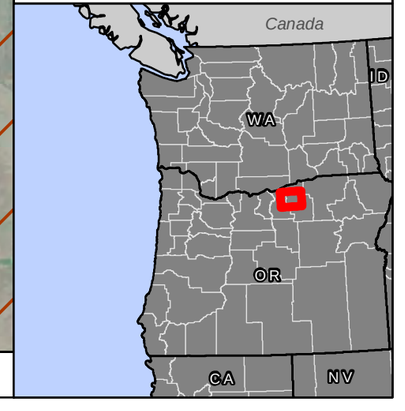
Reference Map




1:150,000 WGS 1984 UTM Zone 11N

0 1 2 4 6 8 Miles

Not for Construction

P:\GIS_PROJECTS\NextEra\WheatridgeMXDs_RFA5\RFA5_HMP\NextEra_Wheatridge_HabitatMitigation_Fig03index_HMA_11i17i_20200330.mxd

# Figure 3.1

## Wheatridge Renewable Energy Facility I and II

### Habitat Mitigation Plan

**Detailed - Habitat Mitigation Area**

**GILLIAM COUNTY, OR**

Middle Rock Creek Ln

Base Line Rd

19

Mikkalo Ln

- Olex Property Boundary
- 324 acres in Current Conservation
- Guzzler
- Sagebrush Planting Area
- Habitat Mitigation Area
- Secondary Road
- Local Road
- County Boundary

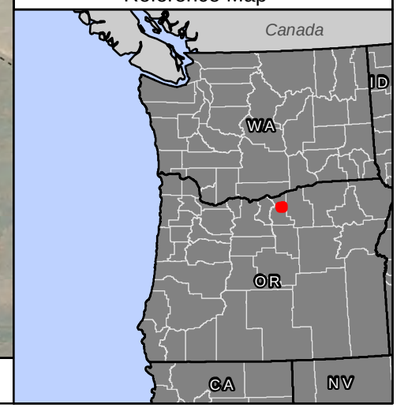
**Habitat Subtype**

- Agriculture
- Developed
- Native Perennial Grassland and Shrub-steppe Mosaic
- Old Field
- Revegetated or Other Planted Grassland

TETRA TECH

NEXTera ENERGY RESOURCES

Reference Map




1:27,000 WGS 1984 UTM Zone 11N

0 0.5 1 2 Miles

Not for Construction

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# Appendix A. Email Approval from ODFW on Habitat Categorization Surveys

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**From:** Cambier, Matt
**To:** Merrick, Jennifer
**Subject:** FW: Wheatridge Wind Pre-Construction Habitat Categorization Survey Protocol
**Date:** Tuesday, June 18, 2019 3:07:02 PM

---

Jennifer,

Email approval from ODFW on Habitat Categorization surveys for compliance with F&W 1.

**Matt Cambier** | **Biologist**
Direct: 208.489.2861 | Cell: 208.954.9415
matt.cambier@tetratech.com

**Tetra Tech** | **Boise Office**
3380 Americana Terrace, Suite 201 | Boise, Idaho 83706 | www.tetratech.com



**From:** Steve Cherry <Steve.P.Cherry@state.or.us>
**Sent:** Monday, June 10, 2019 10:44 AM
**To:** Cambier, Matt <Matt.Cambier@tetratech.com>; Steve Cherry <steve.p.cherry@state.or.us>
**Cc:** Konkol, Carrie <Carrie.Konkol@tetratech.com>; 'Pappalardo, Mike' <MIKE.PAPPALARDO@nexteraenergy.com>; Hurley, Susan <Susan.Hurley@tetratech.com>
**Subject:** RE: Wheatridge Wind Pre-Construction Habitat Categorization Survey Protocol



This all looks good to me. I think you have covered the appropriate issues that need to be addressed in the final habitat assessment. Please let me know if you need anything else.

Steve

---

**From:** Cambier, Matt <Matt.Cambier@tetratech.com>
**Sent:** Thursday, June 6, 2019 9:16 AM
**To:** Steve Cherry <steve.p.cherry@state.or.us>
**Cc:** Konkol, Carrie <Carrie.Konkol@tetratech.com>; 'Pappalardo, Mike' <MIKE.PAPPALARDO@nexteraenergy.com>; Hurley, Susan <Susan.Hurley@tetratech.com>
**Subject:** RE: Wheatridge Wind Pre-Construction Habitat Categorization Survey Protocol

Steve,

Meant to send the PDF version with map. See attached.

**Matt Cambier** | **Biologist**
Direct: 208.489.2861 | Cell: 208.954.9415
matt.cambier@tetratech.com

**Tetra Tech** | **Boise Office**
3380 Americana Terrace, Suite 201 | Boise, Idaho 83706 | www.tetratech.com



---

**From:** Cambier, Matt
**Sent:** Thursday, June 06, 2019 9:57 AM
**To:** Steve Cherry <steve.p.cherry@state.or.us>
**Cc:** Konkol, Carrie <Carrie.Konkol@tetratech.com>; 'Pappalardo, Mike' <MIKE.PAPPALARDO@nexteraenergy.com>; Hurley, Susan <Susan.Hurley@tetratech.com>
**Subject:** Wheatridge Wind Pre-Construction Habitat Categorization Survey Protocol

Steve,

Attached is a memo of the survey protocol for the pre-construction habitat categorization effort that will begin next week for the Wheatridge project. Please review and provide your approval (and any requested changes) via email.

Thank you.

**Matt Cambier** | **Biologist**
Direct: 208.489.2861 | Cell: 208.954.9415
matt.cambier@tetratech.com

**Tetra Tech** | **Boise Office**
3380 Americana Terrace, Suite 201 | Boise, Idaho 83706 | www.tetratech.com

TETRA TECH

# MEMO

| | |
|---|---|
| To: | Steve Cherry, Oregon Department of Fish and Wildlife |
| Cc: | Mike Pappalardo, NextEra; Carrie Konkol, Tetra Tech |
| From: | Susan Hurley and Matt Cambier, Tetra Tech |
| Date: | June 5, 2019 |
| Correspondence # | TTCES-PTLD-2019-086 |
| Subject: | Wheatridge West 2019 Pre-Construction Habitat Categorization Survey Protocol |

Wheatridge Wind Energy, LLC (Wheatridge) an indirect subsidiary of NextEra Energy Resources, LLC (NEER) received a site certificate authorizing certificate holder to construct, operate, and retire the Wheatridge Wind Energy Facility within Morrow and Umatilla counties.

The site certificate approves construction of facilities in Umatilla County and two consolidated site battery storage systems; however, the Umatilla County and battery storage system facilities are not identified for construction as part of the Wheatridge West Project (Project) area. This memo describes the habitat categorization surveys proposed to occur in support of the Project area, located only in Morrow County, Oregon.

The Wheatridge West facility components that Wheatridge intends to begin constructing as early as November 2019 will include:

- Approximately 120 turbines;
- One collector substation;
- One operations and maintenance (O&M) building;
- The Communication and Supervisory Control and Data Acquisition System;
- The electrical collection system;
- Approximately 4 met towers;
- Temporary construction areas;
- New access roads; and

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- Other public road improvements, including increases to the turning radius in several locations.

Wheatridge intends to begin construction of the above facilities as early as November 2019, with construction being completed in advance of a December 2020 operational date. In addition, this pre-construction compliance survey covers the maximum area in which solar facilities could be constructed, as described in the Preliminary Request for Amendment #4 (Wheatridge 2019). Construction timing for the proposed solar facilities is under review.

NextEra contracted with Tetra Tech, Inc. (Tetra Tech) to conduct these surveys for the Project pre-construction survey per condition PRE-FW-01 - habitat categorization, as presented in the Final Order on the Application for Site Certificate for the Wheatridge Wind Energy Facility through the Oregon Energy Facility Siting Council (EFSC 2017). The Survey Area (see attached figure) encompasses all areas of potential impact for both wind and solar facility components at Wheatridge West. The Survey Area is a combination of the micrositing corridor approved for the wind facilities described in the ASC and the amended site boundary associated with the solar facility described in Request for Amendment #4. However, the Survey Area only includes portions of the wind facility micrositing corridor that contain temporary and/or permanent disturbances associated with construction (the micrositing corridor, as permitted, is not going to be completely utilized due to Project design changes).

## Survey Approach and Schedule

Condition PRE-FW-01 (EFSC 2017) reads:

> *"Prior to final site design and facility layout, the certificate holder shall conduct a field-based habitat survey to confirm the habitat categories of all areas that will be affected by facility components, as well as the locations of any sensitive resources such as active raptor and other bird nests. The survey shall be planned in consultation with the department and ODFW, and survey protocols shall be confirmed with the department and ODFW. Following completion of the field survey, and final layout design and engineering, the certificate holder shall provide the department and ODFW a report containing the results of the survey, showing expected final location of all facility components, the habitat categories of all areas that will be affected by facility components, and the locations of any sensitive resources.*
>
> *The report shall also include an updated version of Table FW-1 Potential Temporary and Permanent Impacts by Habitat Category and Type of the final order, showing the acres of expected temporary and permanent impacts to each habitat category, type, and sub-type. The preconstruction survey shall be used to complete final design, facility layout, and micrositing of facility components. As part of the report, the certificate holder shall include its impact assessment methodology and calculations, including assumed temporary and permanent impact acreage for each transmission structure, wind turbine, access road, and all other facility components. If construction laydown yards are to be retained post construction, due to a landowner request or otherwise, the construction laydown yards must be calculated as permanent impacts, not temporary.*

> *In classifying the affected habitat into habitat categories, the certificate holder shall consult with the department and ODFW. The certificate holder shall not begin construction of the facility until the habitat assessment, categorization, and impact assessment has been approved by the department, in consultation with ODFW. The certificate holder shall not construct any facility components within areas of Category 1 habitat and shall avoid temporary disturbance of Category 1 habitat."*

Tetra Tech will use aerial photography, topographic maps, National Land Cover Database, Northwest Regional Gap Analysis data, and Oregon Department of Fish and Wildlife (ODFW) Big Game habitat data to confirm habitat types within the Survey Area that were previously mapped for the Project. Previous habitat polygons will be reviewed using these desktop sources and edited to reflect obvious land use changes. These edits and less obvious changes to habitat type and/or habitat category will be confirmed during field efforts. Consistent with Fish and Wildlife Condition 1 (EFSC 2017), habitat categories will be identified in the Survey Area (see attached figure), as well as the locations of any sensitive resources observed while performing the habitat survey, such as active raptor and other bird nests.

Habitat will be mapped and classified per the habitat categories set forth in Oregon Administrative Rules (OAR) 635-415-0025, including an assessment of habitat quality. If a biologist determines that a habitat type designation or categorization does not correspond to conditions previously described, or that the extent of a previously described area had changed, that area will be surveyed to assess habitat type and category in a manner consistent with previous survey definitions (Wheatridge 2015, Wheatridge 2019). Surveyors will document all state sensitive wildlife species observed during surveys, as well as noxious weeds and Oregon Department of Agriculture-listed and candidate plant species with the potential to occur at the Project (Wheatridge 2019). The schedule for field efforts is tentatively set to begin on June 12, 2019. The surveys will be completed in 5-10 days and a survey report will be prepared in a timeframe that meets all applicable pre-construction conditions.

The survey report will contain the results of this habitat mapping and categorization effort, along with a summary of the state sensitive wildlife species observed during other surveys conducted at the Project. According to the requirements of Fish and Wildlife Condition 1 (EFSC 2017), Tetra Tech will include in the report a map showing expected final location of all Project components, the habitat categories of all areas that will be affected by Project components, and the locations of any sensitive resources. The report shall also include an updated version of Table FW-1 (Potential Temporary and Permanent Impacts by Habitat Category and Type) from the Final Order, showing the acres of expected temporary and permanent impacts to each habitat category, type, and sub-type. The report will include impact assessment methodology and calculations, including assumed temporary and permanent impact acreage for each transmission structure, wind turbine, access road, and all other facility components.

EFSC (Energy Facility Siting Council). 2017. Final Order on the Wheatridge Wind Energy Facility. April 2017.

Wheatridge (Wheatridge Wind Energy, LLC). 2015. Wheatridge Wind Energy Facility Application for Site Certificate. Prepared by Tetra Tech, Inc. July 2015.

Wheatridge (Wheatridge Wind Energy, LLC). 2019. Preliminary Request for Amendment #4 for the Wheatridge Wind Energy Facility. Prepared by Tetra Tech, Inc. November 2018.

# Wheatridge Wind Energy Facility

NEXTera ENERGY RESOURCES

## Habitat Survey Area

UMATILLA COUNTY, OR

Umatilla County

Morrow County

207

578

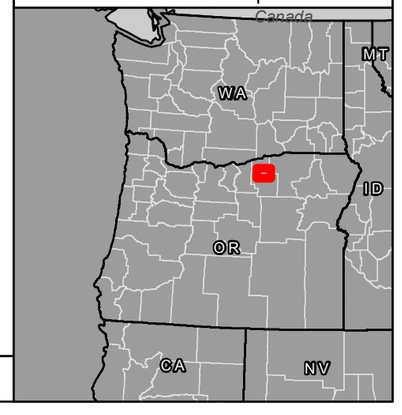
74

Lexington

- Solar Survey Area
- Wind Survey Area
- Turbine
- Met Tower
- Substation
- O&M Facility
- Collection Lines
- Access Road
- Secondary Road
- City/Town

TETRA TECH

Reference Map




1:100,000 WGS 1984 UTM Zone 11N

0 0.5 1 2 3 4 Miles

NOT FOR CONSTRUCTION

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**Archived:** Wednesday, September 4, 2019 1:51:17 PM
**From:** Steve Cherry
**Sent:** Fri, 16 Aug 2019 17:44:43
**To:** Cambier, Matt; Steve Cherry; ESTERSON Sarah * ODOE
**Cc:** Konkol, Carrie; Merrick, Jennifer; Hurley, Susan; Karen Kronner; Pappalardo, Mike
**Subject:** RE: Wheatridge West HMA habitat assessment protocol
**Sensitivity:** Normal

---



That methodology looks acceptable to ODFW. I appreciate you putting that together for us. Please let me know if you need anything else. Thanks

Steve

---

**From:** Cambier, Matt <Matt.Cambier@tetratech.com>
**Sent:** Wednesday, August 14, 2019 3:35 PM
**To:** Steve Cherry <steve.p.cherry@state.or.us>; ESTERSON Sarah * ODOE <Sarah.Esterson@oregon.gov>
**Cc:** Konkol, Carrie <Carrie.Konkol@tetratech.com>; Merrick, Jennifer <Jennifer.Merrick@tetratech.com>; Hurley, Susan <Susan.Hurley@tetratech.com>; Karen Kronner <Kronner@NW-WildlifeConsultants.com>; Pappalardo, Mike <MIKE.PAPPALARDO@nexteraenergy.com>
**Subject:** Wheatridge West HMA habitat assessment protocol

Hi Sarah and Steve,

Attached is a memo describing the habitat assessment of the HMA that will be included in the Final HMP for Wheatridge West. Per condition PRE-FW-04 (d) – as recommended in the DPO for RFA4, the certificate holder needs to get approval of the habitat assessment methods from ODOE and ODFW.

***PRE-FW-04 (d)*** *The certificate holder shall provide a habitat assessment of the habitat mitigation area, based on a protocol approved by the Department in consultation with ODFW, which includes methodology, habitat map and available acres by habitat category and subtype in tabular format.*

Please review and provide either your approval or your recommended changes.

Thank you.

**Matt Cambier** | **Biologist**
Direct: 208.489.2861 | Cell: 208.954.9415
matt.cambier@tetratech.com

**Tetra Tech** | **Boise Office**
3380 Americana Terrace, Suite 201 | Boise, Idaho 83706 | www.tetratech.com

# MEMO

| | |
|---|---|
| To: | Steve Cherry, Oregon Department of Fish and Wildlife; Sara Esterson, Oregon Department of Energy |
| Cc: | Mike Pappalardo, NextEra; Carrie Konkol, Tetra Tech; Karen Kronner, NWC |
| From: | Matt Cambier and Susan Hurley, Tetra Tech |
| Date: | August 14, 2019 |
| Correspondence # | TTCES-PTLD-2019-124 |
| Subject: | Wheatridge West Project: 2019 Habitat Assessment Protocol for Habitat Mitigation Area |

Wheatridge Wind Energy, LLC (Wheatridge) an indirect subsidiary of NextEra Energy Resources, LLC (NEER) received a site certificate authorizing certificate holder to construct, operate, and retire the Wheatridge Wind Energy Facility within Morrow and Umatilla counties.

The site certificate approves construction of facilities in Umatilla County and two consolidated site battery storage systems; however, the Umatilla County and battery storage system facilities are not identified for construction as part of the Wheatridge West Project (Project) area. This memo describes the habitat assessment protocol to be used to evaluate the habitat subtypes and categories available at the Habitat Mitigation Area (HMA) being proposed in the Project's Habitat Mitigation Plan (HMP).

The HMP is being finalized prior to construction in accordance with site certificate conditions PRE-FW-01 and PRE-FW-04. Condition PRE-FW-04 was modified on July 25, 2019 in the Draft Proposed Order[1] on Request for Amendment 4 of the Site Certificate to require a habitat assessment of the HMA. The additional language regarding the habitat assessment is at PRE-FW-04(d) and reads:

***PRE-FW-04 (d)*** *The certificate holder shall provide a habitat assessment of the habitat mitigation area, based on a protocol approved by the Department in consultation with ODFW, which includes methodology, habitat map and available acres by habitat category and subtype in tabular format.*

[1] The Draft Proposed Order on Request for Amendment 4 of the Site Certificate Energy Facility Siting Council Hearing is scheduled for August 22, 2019.

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Tel 503.221.8636 Fax 503.227.1287 www.tetratech.com

## Wheatridge West HMA Habitat Assessment Protocol

The HMA is the area where the Certificate Holder is proposing to perform enhancement and preservation actions that are in addition to the revegetation of areas of temporary disturbance associated with the Project. The Certificate Holder identified privately-owned land that contains native and revegetated uplands of interest and importance for conservation.

The private land owners of the HMA are Karen Kronner and Bob Gritski. Karen is the president of Northwest Wildlife Consultants, Inc., an Oregon registered woman business enterprise specializing in Columbia Basin and Great Basin wildlife and botanical surveys, monitoring and environmental permitting for wind power and other energy projects. Karen and Bob are experienced biologists, with a working familiarity of the habitat subtypes being impacted by the Project. They have delineated the habitat subtypes on their property already.

The habitat assessment that will be included in the HMP will show the following:

1. habitat subtypes as delineated by the land owners in a tabular format by acreage;
2. habitat subtypes as delineated by the land owners in a map/figure;
3. a general description of each habitat subtype including the dominant grasses, forbs, and/or shrubs found in each;
4. representative photos of each habitat subtype; and
5. the habitat subtypes at the HMA will be categorized following the methods in the ODFW Habitat Mitigation Policy, in the same manner that habitat categorization was performed for the Project.

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# Appendix B. Photolog

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**Photo 1. Big Game Winter Range.** Mule deer in native grassland and basin big sagebrush/rabbitbrush cover, early winter.

**Photo 2. Big Game Winter Range.** Upper half of photo is upland habitat in winter at the HMA and surrounding ranch property. There are canyons with cover, shallow soil slopes that have green up starting in late fall to early winter and topographic relief for escape cover.

**Photo 3. Native Perennial Grassland and Shrub-steppe Mosaic.** Exotic Annual Grassland with some residual native perennial grasses, native forbs, and scattered sagebrush and rabbitbrush. Fall season photo.

**Photo 4. Native Perennial Grassland and Shrub-steppe Mosaic.** Native perennial grassland, scattered shrubs, exotic annual grasses, snakeweed, Basin big sagebrush and grey and green rabbitbrush. Large canyon with seeps and springs and basin wild ryegrass. Fall season photo.

**Photo 5. Native Perennial Grassland and Shrub-steppe Mosaic.** Native perennial grassland with scattered shrubs, sagebrush in lower elevations.

**Photo 6. Native Perennial Grassland and Shrub-steppe Mosaic.** Native perennial grassland in canyon with forbs, shrubs, and clematis. North-facing slope with deeper soils and south-facing slope with shallow soil and basalt outcroppings. Resting and escape cover for deer and elk.

**Photo 7. Native Perennial Grassland and Shrub-steppe Mosaic.** Example of inclusions of annual grasses (cheatgrass) with some native perennial grasses, native forbs, and scattered sagebrush and rabbitbrush.

**Photo 8. Revegetated or Other Planted Grassland.** Higher elevation is planted perennial grassland (revegetated with 3-5 grass species). Slopes are native perennial grasses with patches of exotic annual grasses.

**Photo 9. Revegetated or Other Planted Grassland.** Mature revegetated grassland with scattered rabbitbrush and sagebrush. Perennial grasses, exotic annual grasses and some native bunchgrass and forbs.

**Photo 10. Native Perennial Grassland and Shrub-steppe Mosaic.** Example of inclusions of basin big sagebrush.

**Photo 11. Native Perennial Grassland and Shrub-steppe Mosaic.** Example of inclusions of basin big sagebrush and rabbitbrush.

**Photo 12. Native Perennial Grassland and Shrub-steppe Mosaic.** Maturing shrub-steppe: sagebrush, gray and green rabbitbrush, snakeweed. Perennial and annual grasses. Native perennial grassland on slope. Canyon with shrubs and seeps.

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# Appendix C. Wheatridge Habitat Mitigation Area and Surrounding Area Comprehensive List of All Vertebrate Wildlife Observed 2008–2019

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# Wheatridge Habitat Mitigation Area and Surrounding Area
# Comprehensive List of all Vertebrate Wildlife Observed 2008–2019

(listed alphabetically within wildlife groups and classes)

| Common Name | *Scientific Name* |
|---|---|
| **Birds - 152** | |
| ***Waterfowl - 11*** | |
| American white pelican | *Pelecanus erythrorhynchos* |
| Blue-winged teal | *Anas discors* |
| Canada goose | *Branta canadensis* |
| Cinnamon teal | *Anas cyanoptera* |
| Common merganser | *Mergus merganser* |
| Greater white-fronted goose | *Anser albifrons* |
| Green-winged teal | *Anas crecca* |
| Mallard | *Anas platyrhynchos* |
| Northern pintail | *Anas acuta* |
| Northern shoveler | *Anas clypeata* |
| Snow goose | *Chen caerulescens* |
| ***Raptors - 21*** | |
| Cooper's hawk | *Accipiter cooperii* |
| Sharp-shinned hawk | *Accipiter striatus* |
| Ferruginous hawk[1] | *Buteo regalis* |
| Red-tailed hawk | *Buteo jamaicensis* |
| Rough-legged hawk | *Buteo lagopus* |
| Swainson's hawk[1] | *Buteo swainsoni* |
| Bald eagle | *Haliaeetus leucocepahlus* |
| Golden eagle | *Aquila chrysaetos* |
| American kestrel | *Falco sparverius* |
| Merlin | *Falco columbarius* |
| Peregrine falcon | *Falco peregrinus* |
| Prairie falcon | *Falco mexicanus* |
| Northern harrier | *Circus cyaneus* |
| Osprey | *Pandion haliaetus* |
| Barn owl | *Tyto alba* |
| Barred Owl | *Strix varia* |
| Great horned owl | *Bubo virginianus* |
| Northern saw-whet owl | *Aegolius acadicus* |
| Short-eared owl | *Asio flammeus* |
| Western screech owl | *Megascops kennicottii* |

| Common Name | *Scientific Name* |
|---|---|
| Turkey vulture | *Cathartes aura* |
| ***Crane - 1*** | |
| Sandhill crane | *Antigone canadensis* |
| ***Dove - 3*** | |
| Eurasian collared-dove | *Streptopelia decaocta* |
| Mourning dove | *Zenaida macroura* |
| Rock pigeon | *Columba livia* |
| ***Gamebird - 5*** | |
| California quail | *Callipepla californica* |
| Chukar | *Alectoris chukar* |
| Gray partridge | *Perdix perdix* |
| Ring-necked pheasant | *Phasianus colchicus* |
| Wild turkey | *Meleagris gallopavo* |
| ***Goatsucker - 2*** | |
| Common nighthawk[1] | *Chordeiles minor* |
| Common poorwill | *Phalaenoptilus nuttallii* |
| ***Gull - 2*** | |
| Franklin's gull | *Larus pipixcan* |
| Western gull | *Larus occidentalis* |
| ***Hummingbird - 4*** | |
| Anna's hummingbird | *Calypte anna* |
| Black-chinned hummingbird | *Archilochus alexandri* |
| Calliope hummingbird | *Stellula calliope* |
| Rufous hummingbird | *Selasphorus rufus* |
| ***Kingfisher - 1*** | |
| Belted kingfisher | *Megaceryle alcyon* |
| ***Shorebird - 5*** | |
| Greater yellowlegs | *Tringa melanoleuca* |
| Killdeer | *Charadrius vociferous* |
| Long-billed curlew[1] | *Numenius americanus* |
| Spotted sandpiper | *Actitis macularius* |
| Wilson's snipe | *Gallinago delicata* |
| ***Swift - 1*** | |
| Vaux's swift | *Chaetura vauxi* |
| ***Wading Bird - 5*** | |
| American bittern | *Botaurus lentiginosus* |
| American coot | *Fulica americana* |

| Common Name | *Scientific Name* |
|---|---|
| Black-crowned night-heron | *Nycticorax nycticorax* |
| Great blue heron | *Ardea herodias* |
| Virginia rail | *Rallus limicola* |
| ***Woodpecker - 5*** | |
| Downy woodpecker | *Picoides pubescens* |
| Hairy woodpecker | *Picoides villosus* |
| Lewis' woodpecker[1] | *Melanerpes lewis* |
| Northern flicker | *Colaptes auratus* |
| Red-naped sapsucker | *Sphyrapicus nuchalis* |
| ***Passerine - 81*** | |
| American goldfinch | *Spinus tristis* |
| American pipit | *Anthus rubescens* |
| American robin | *Turdus migratorius* |
| American tree sparrow | *Spizelloides arborea* |
| Ash-throated flycatcher | *Myiarchus cinerascens* |
| Bank swallow | *Riparia riparia* |
| Barn swallow | *Hirundo rustica* |
| Bewick's wren | *Thryomanes bewickii* |
| Black-capped chickadee | *Poecile atricapillus* |
| Black-headed grosbeak | *Pheucticus melanocephalus* |
| Black-throated gray warbler | *Dendroica nigrescens* |
| Brewer’s blackbird | *Euphagus cyanocephalus* |
| Brown creeper | *Certhia americana* |
| Brown-headed cowbird | *Molothrus ater* |
| Bullock’s oriole | *Icterus bullockii* |
| Bushtit | *Psaltriparus minimus* |
| Canyon wren | *Catherpes mexicanus* |
| Cassin’s finch | *Carpodacus cassinii* |
| Cassin's vireo | *Vireo cassinii* |
| Cedar waxwing | *Bombycilla cedrorum* |
| Chipping sparrow | *Spizella passerina* |
| Cliff swallow | *Hirundo pyrrhonota* |
| Common redpoll | *Acanthis flammea* |
| Common yellowthroat | *Geothlypis trichas* |
| Dark-eyed junco | *Junco hyemalis* |
| Eastern kingbird | *Tyrannus tyrannus* |
| European starling | *Sturnus vulgaris* |

| Common Name | *Scientific Name* |
|---|---|
| Evening grosbeak | *Coccothraustes vespertinus* |
| Fox sparrow | *Passerella iliaca* |
| Golden-crowned kinglet | *Regulus satrapa* |
| Golden-crowned sparrow | *Zonotrichia atricapilla* |
| Grasshopper sparrow[1] | *Ammodramus savannarum perpallidus* |
| Gray flycatcher | *Empidonax wrightii* |
| Hammond's flycatcher | *Empidonax hammondii* |
| Harris's sparrow | *Zonotrichia querula* |
| Hermit thrush | *Catharus guttatus* |
| Horned lark | *Eremophila alpestris* |
| House finch | *Carpodacus mexicanus* |
| House sparrow | *Passer domesticus* |
| House wren | *Troglodytes aedon* |
| Lark sparrow | *Chondestes grammacus* |
| Lazuli bunting | *Passerina amoena* |
| Lesser goldfinch | *Carduelis psaltria* |
| Loggerhead shrike[1] | *Lanius ludovicianus* |
| MacGillivray's warbler | *Oporornis tolmiei* |
| Mountain chickadee | *Poecile gambeli* |
| Northern rough-winged swallow | *Stelgidopteryx serripennis* |
| Northern shrike | *Lanius excubitor* |
| Olive-sided flycatcher | *Contopus cooperi* |
| Orange-crowned warbler | *Oreothlypis celata* |
| Pacific wren | *Troglodytes pacificus* |
| Pine siskin | *Carduelis pinus* |
| Purple finch | *Carpodacus purpureus* |
| Red crossbill | *Loxia curvirostra* |
| Red-breasted nuthatch | *Sitta canadensis* |
| Red-winged blackbird | *Agelaius phoeniceus* |
| Rock wren | *Salpinctes obsoletus* |
| Rose-breasted grosbeak | *Pheucticus ludovicianus* |
| Ruby-crowned kinglet | *Regulus calendula* |
| Savannah sparrow | *Passerculus sandwichensis* |
| Say’s phoebe | *Sayornis saya* |
| Song sparrow | *Melospiza melodia* |
| Spotted towhee | *Pipilo maculatus* |
| Townsend's solitaire | *Myadestes townsendi* |

| Common Name | *Scientific Name* |
|---|---|
| Townsend's warbler | *Dendroica townsendi* |
| Tree swallow | *Tachycineta bicolor* |
| Varied thrush | *Ixoreus naevius* |
| Vesper sparrow | *Pooecetes gramineus* |
| Violet-green swallow | *Tachycineta thalassina* |
| Warbling vireo | *Vireo gilvus* |
| Western kingbird | *Tyrannus verticalis* |
| Western tanager | *Piranga ludoviciana* |
| Western wood-peewee | *Contopus sordidulus* |
| White-breasted nuthatch | *Sitta carolinensis* |
| White-crowned sparrow | *Zonotrichia leucophrys* |
| White-throated sparrow | *Zonotrichia albicollis* |
| Willow flycatcher | *Empidonax traillii* |
| Wilson's warbler | *Wilsonia pusilla* |
| Yellow warbler | *Setophaga petechia* |
| Yellow-breasted chat | *Icteria virens* |
| Yellow-rumped warbler | *Dendroica coronata* |
| ***Corvid - 5*** | |
| American crow | *Corvus brachyrhynchos* |
| Black-billed magpie | *Pica hudsonia* |
| Common raven | *Corvus corax* |
| Steller's jay | *Cyanocitta stelleri* |
| Western scrub-jay | *Aphelocoma californica* |
| **Mammals – 40** | |
| American badger | *Taxidea taxus* |
| American mink | *Neovison vison* |
| Beaver | *Castor canadensis* |
| Belding’s ground squirrel | *Urocitellus beldingi* |
| Big-brown bat | *Eptesicus fuscus* |
| Bobcat | *Lynx rufus* |
| Bushy-tailed woodrat | *Neotoma cinerea* |
| California myotis | *Myotis californicus* |
| Canyon bat | *Parastrellus hesperus* |
| Porcupine | *Erethizon dorsatum* |
| Raccoon | *Procyon lotor* |
| Cougar | *Puma concolor* |
| Coyote | *Canis latrans* |

| Common Name | *Scientific Name* |
|---|---|
| Deer mouse | *Peromyscus maniculatus* |
| Elk | *Cervus elaphus* |
| Fringed myotis | *Myotis thysanodes* |
| Hoary bat[1] | *Lasiurus cinereus* |
| House mouse | *Mus musculus* |
| Little brown myotis | *Myotis lucifugus* |
| Long-eared myotis | *Myotis evotis* |
| Long-legged myotis | *Myotis volans* |
| Long-tailed weasel | *Mustela frenata* |
| Montane vole | *Microtus montanus* |
| Mountain cottontail | *Sylvilagus nuttallii* |
| Mule deer | *Odocoileus hemionus* |
| Northern pocket gopher | *Thomomys talpoides* |
| Ord's kangaroo rat | *Dipodomys ordii* |
| Pallid bat[1] | *Antrozous pallidus pacificus* |
| Pronghorn | *Antilocarpa americana* |
| Red fox | *Vulpes vulpes* |
| River otter | *Lutra canadensis* |
| Silver-haired bat[1] | *Lasionycteris noctivagans* |
| Striped skunk | *Mephitis mephitis* |
| Townsend's big-eared bat[1] | *Corynorhinus townsendii* |
| Virginia opossum | *Didelphis virginiana* |
| Washington ground squirrel[2] | *Urocitellus washingtoni* |
| Western small-footed myotis | *Myotis ciliolabrum* |
| White-tailed deer | *Odocoileus virginianus* |
| White-tailed jackrabbit | *Lepus townsendii* |
| Yellow-bellied marmot | *Marmota flaviventris* |
| **Amphibians and Reptiles - 14** | |
| Common garter snake | *Thamnophis sirtalis* |
| Gopher snake | *Pituophis catenifer* |
| Great Basin spadefoot | *Elgaria coerulea* |
| Long-toed salamander | *Ambystoma macrodactylum* |
| Northern alligator lizard | *Spea intermontana* |
| Northern sagebrush lizard[1] | *Sceloporus graciosus graciosus* |
| Night snake | *Hypsiglena torquata* |
| Pacific chorus frog | *Pseudacris regilla* |
| Side-blotched lizard | Uta *stansburiana* |

| Common Name | *Scientific Name* |
|---|---|
| Racer | *Coluber constrictor* |
| Western fence lizard | *Sceloporus occidentalis* |
| Western rattlesnake | *Crotalus viridis* |
| Western skink | *Eumeces skiltonianus* |
| Western toad | *Bufo boreas* |
| 1. Denotes ODFW Sensitive Species in the Columbia Plateau Ecoregion (ODFW 2016).[1]<br>2. Denotes ODFW Endangered Species (ODFW 2018).[2] | |

[1] ODFW. 2016. Oregon Department of Fish and Wildlife Sensitive Species List. Available online at: https://www.dfw.state.or.us/wildlife/diversity/species/docs/2016_Sensitive_Species_List.pdf

[2] ODFW. 2018. Threatened, Endangered, and Candidate Fish and Wildlife Species in Oregon. Available online at: https://www.dfw.state.or.us/wildlife/diversity/species/docs/Threatened_and_Endangered_Species.pdf

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# Appendix D. WREFI and WREFII Habitat Mitigation Area Annual Reporting Outline

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# WREFI and WREFII West Habitat Mitigation Area Annual Reporting Outline

## 1.0 Background

- Project statement.
- Identify the monitoring report's timeframe and reference to previous monitoring reports.
- General description of the amount and quality of vegetation at the HMA and discuss if/how it has changed year/year.
- Discuss annual climate data and any disturbances that have occurred on the HMA such as fire, flooding, or erosion.

## 2.0 Enhancement Actions Implemented

- Discussion of enhancement actions performed during this report's monitoring timeframe.

## 3.0 Monitoring of Enhancement Actions

Discussion of monitoring efforts for previous years' enhancement actions

1. Sagebrush plantings
    a. Native shrub density estimates
    b. Native shrub diversity estimates
2. Weed control
    a. Discussion of previous years' treatments
    b. Photo point monitoring of treated areas
3. Guzzler
    a. Discussion of installation and operation
    b. Discussion of maintenance performed
    c. Discussion of weed control and native plant recruitment in areas disturbed during installation.
4. Barbed wire removal

a. Discuss this effort in year that this action is performed, otherwise no monitoring once performed.

## 4.0 Recommendations for Next Year

1. Make recommendations for any adaptive management at sagebrush plantings
2. Make recommendations for weed control efforts

# Appendix A. Sagebrush Monitoring Plot Belt Transect Forms

# Appendix B. Photo Point Monitoring

# Wheatridge Renewable Energy Facility I Revegetation Plan

**Prepared for**
**Wheatridge Wind Energy, LLC**

**Prepared by**

TETRA TECH

**April 2020**
Effective Date: Wheatridge Renewable Energy Facility I Site Certificate Effective Date

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# 1.0 Introduction

This Revegetation Plan (Plan) has been prepared for the Wheatridge Renewable Energy Facility I (WREFI), a 100-megwatt (MW) wind energy facility in Morrow County. Wheatridge Wind Energy, LLC (Certificate Holder) holds the site certificate for WREFI. WREFI has areas of overlapping Site Boundary and shared related and supporting facilities with Wheatridge Renewable Energy Facility II (WREFII).

The two facilities were originally permitted as one facility, the Wheatridge Wind Energy Facility (WWEF). WWEF was granted approval of a site certificate by the Oregon Department of Energy's (ODOE) Energy Facility Siting Council (EFSC) on April 28, 2017 (EFSC 2017a) consisting of facilities in north Morrow (Wheatridge West) and Umatilla (Wheatridge East) counties[1]. Wheatridge West began construction in January 2020.

Prior to operation but after construction had commenced, WWEF was split into WREFI and WREFII. This Plan has been prepared for WREFI but reflects the plan prepared for Wheatridge West as part of pre-construction compliance in coordination with and approved by ODOE and Morrow County.

# 2.0 Pre-Construction Compliance

This plan addresses the following pre-construction conditions of the Fourth Amended Site Certificate for the WWEF (EFSC 2019):

> ***PRE-SP-02*** *Prior to construction, the certificate holder shall ensure that the final Revegetation Plan includes a program to protect and restore agricultural soils temporarily disturbed during facility construction. As described in the final order, agriculture soils shall be properly excavated, stored, and replaced by soil horizon. Topsoil shall be preserved and replaced. The Revegetation Plan shall be finalized pursuant to Fish and Wildlife Habitat Condition 11 (PRE-FW-05).*
>
> ***PRE-FW-05*** *Before beginning construction, the certificate holder shall prepare and receive approval of a final Revegetation Plan, provided as Attachment C to this order, from the department, in consultation with Umatilla and Morrow counties and ODFW. The certificate holder shall implement the requirements of the approved plan during all phases of construction and operation of the facility.*

The details of this plan were developed in consultation with personnel from the Oregon Department of Fish and Wildlife (ODFW), ODOE and Morrow County Weed Control Department. This plan describes the practices and standards for restoring those areas temporarily disturbed during construction of WREFI, including planting methods, monitoring requirements, success criteria, and adaptive management (in case success criteria are not met); it does not apply to areas

[1] The site certificate for the WWEF was amended five times, including the addition of solar energy generation and battery storage components and splitting the facility into WREFI and WREFII (EFSC 2017b, 2018a, 2018b, 2019).

permanently occupied by WREFI. Throughout construction and revegetation activities, the Certificate Holder will take appropriate actions to prevent the spread of noxious weeds as identified in the May 2019 Morrow County Code Enforcement Ordinance Section 11. Where appropriate, and pursuant to consultation with the Morrow County Weed Control Supervisor, monitoring of noxious weeds and the effectiveness of weed control/eradication efforts will be performed concurrently with the revegetation monitoring described in this document. A stand-alone Noxious Weed Control Plan includes information on Morrow County-listed noxious weeds, noxious weeds observed during surveys at WREFI, and the prevention, treatment, and monitoring of noxious weed infestations (Tetra Tech 2020a).

# 3.0 Site Description

WREFI is located in Morrow County, Oregon. It lies within the Columbia Plateau Ecoregion at elevations from approximately 780 to 1,300 feet. WREFI is sited entirely on private land and primarily in agricultural land used for growing dryland wheat. Native vegetation has been modified not only through agricultural conversion, but also through historical and current livestock grazing, by changes in fire regimes, and by the presence of exotic grasses and other vegetation.

Habitats within the WREFI boundary include Developed (subtypes include Dryland Wheat and Other Developed), Grassland (Exotic Annual, Revegetated Grassland, and Native Perennial), and Shrub-steppe (Basin Big Sagebrush and Snakeweed/Rabbitbrush). The Habitat Mitigation Plan (HMP; Tetra Tech 2020b) details the acres of each habitat subtype that will be temporarily and permanently disturbed during construction and operation of WREFI. For purposes of this plan, disturbance to Developed-Dryland Wheat and Developed-Other habitat subtypes are grouped together. Developed-Other habitat subtypes include farm and ranch homes and related infrastructure, roads, quarries, livestock facilities, and other areas associated with human activity. Disturbance to all other habitat subtypes are collectively referred to as wildlife habitat.

## 3.1 Temporary Disturbance to Dryland Wheat and Other

Temporary disturbance to areas identified as Developed-Dryland Wheat and Developed-Other habitat subtypes are shown in Table 1. Figures depicting the location of these temporary disturbances are available in the HMP (Tetra Tech 2020b). Restoration of Developed-Other habitat subtypes will be determined on a case-by-case basis and is not covered further in this plan. Temporary disturbances to Developed-Dryland Wheat will be restored as described in Section 4.3.

**Table 1. Summary of Temporary Disturbances to Cropland**

| Habitat Subtype (Category 6 Habitat) | Temporary Disturbance (Acres) |
|---|---|
| Dryland Wheat | 195.6 |
| Developed-Other | 0.7 |
| **TOTAL** | **196.4** |

## 3.2 Temporary Impacts to Wildlife Habitat

Temporary disturbance to areas identified as wildlife habitat are shown in Table 2. Figures depicting the locations of these temporary disturbances are available in the HMP (Tetra Tech 2020b). These temporary disturbances will be restored as described in Section 4.4.

**Table 2. Summary of Temporary Disturbances to Wildlife Habitat**

| Habitat Category | Habitat Subtype | Temporary Disturbance (Acres) |
|---|---|---|
| 3 | Revegetated or Other Planted Grassland | 3.3 |
| | Native Perennial Grassland | 6.5 |
| | Shrub-steppe with Rabbitbrush/Snakeweed | 2.4 |
| | Shrub-steppe with Basin Big Sagebrush | 1.5 |
| 4 | Exotic Annual Grassland | 3.8 |
| | Shrub-steppe with Rabbitbrush/Snakeweed | 0.0 |
| **TOTAL** | | **17.6** |

# 4.0 Revegetation Methods

This plan addresses revegetation methods for both Dryland Wheat and wildlife habitat. Revegetation will begin as soon as feasible after construction completes. Seeding and planting will be done in a timely manner and in the appropriate season. Restoration of Dryland Wheat will be designed in consultation with the landowner.

## 4.1 Roles and Responsibilities

The Certificate Holder has identified a construction contractor to build WREFI. The construction contractor will be responsible for implementing the measures in the National Pollutant Discharge Elimination System (NPDES) 1200-C permit, as well as the revegetation activities discussed herein during and immediately after construction. A qualified botanist or revegetation specialist will be responsible for monitoring and reporting on revegetation success. Remedial revegetation actions, if needed during the operation phase, will be performed by a qualified contractor. The Certificate Holder will be responsible for ensuring that all contractors perform work in accordance with permit requirements and all agreed upon methods for revegetation.

## 4.2 Site Preparation

In areas where soil is removed during construction, the topsoil will be stockpiled separately from the subsurface soils. The conserved soil will be put back in place as topsoil prior to revegetation activities. Prior to seeding and/or planting of revegetation areas, soils will be prepared to facilitate revegetation success. Soil preparation will involve standard, commonly used methods, and will take into account all relevant site-specific factors, including slope, size of area, and erosion potential. In

general, the soil needs to be prepared into a firm, fine-textured seedbed that is relatively free of debris before seeding or planting. Shallow tilling with a disc, followed by a harrow or drag if necessary, can typically achieve this. If replaced soil is too soft, then seeds may be buried too deep to properly germinate; a roller or culti-packer should be used to pack down the soil.

In non-cropland areas, site complexity should be considered during soil preparation. For instance, it may be desirable to purposely create an uneven, patchy site that allows for depressions and other microsites that result in small variations in aspect and moisture holding to promote complexity. The construction contractor will use mulching and other appropriate practices, as required by the NPDES 1200-C permit, to control erosion and sediment during construction and revegetation work.

## 4.3 Restoration of Cropland

Croplands will be reseeded with the appropriate crop or maintained as fallow in consultation with the landowner or farm operator. The construction contractor will also consult with the landowner or farm operator to determine seed mix, application methods, and rates for seed and fertilizer. Success of cropland revegetation will have been achieved when production of the revegetated area is comparable to that of adjacent, non-disturbed croplands. Success determination will involve consultation with the landowner or farm operator, and the Certificate Holder will report to ODOE on the success of cropland restoration efforts. Noxious weed control is necessary for successful revegetation of croplands and will be implemented per the methods described in the Noxious Weed Control Plan (Tetra Tech 2020a).

Soil compaction is a concern for restoring agricultural soils to their pre-construction productivity. During construction of temporary facilities, the Certificate Holder would excavate and store soils by soil horizon, so that soils could be replaced and restored appropriately, including replacing topsoil. During post-construction restoration of temporary impacts to agricultural areas, the Certificate Holder would loosen agricultural soil by mechanical scarification (tilling or ripping the soil) to an appropriate depth to reduce the potential effects of compaction. Soil amendment, by addition of organic matter (compost), may also be necessary to alleviate compaction.

## 4.4 Restoration of Wildlife Habitat

All wildlife habitat will be reseeded with a mix of native or non-invasive, non-persistent non-native grasses. The seed mix and application rates described in Section 4.5 have been determined in consultation with ODFW, and include consideration of the soil types, erosion potential, and growing conditions found near WREFI. The seed mix has been approved by ODFW (July 31, 2019) and seeds will be obtained from a reputable supplier in compliance with the Oregon Seed Law (Oregon Administrative Rule 603-056).

The methods used and timing of planting will be appropriate to the seed mix, weather conditions, and site conditions (including area size, slope, and erosion potential) based upon consultation with ODFW and the Morrow County Weed Control Supervisor. Preparation of disturbed ground may include replacing lost topsoil, or chemical or mechanical weed control per the Noxious Weed Control Plan (Tetra Tech 2020a). Following soil preparation (Section 4.2), seed mixes in non-cropland areas will be applied through broadcast or drill seeding.

During construction, the construction contractor will implement site stabilization measures, including seeding of temporarily disturbed areas according to the NPDES 1200-C permit. Approximately 6 months prior to commercial operation, the Certificate Holder and construction contractor will meet with ODFW, ODOE, and Morrow County Weed Control Authority personnel to review the actual extent and conditions of temporarily impacted areas, confirm the revegetation methods to be implemented, and to revisit reference areas as necessary.

### *4.4.1 Broadcast Seeding*

In this method, the seed mix will be broadcast at a rate of 20-24 pounds per acre, per discussions with a seed supplier and ODFW. The rate may be adjusted depending on the recommendations of the actual seed supplier. Broadcasting should not be utilized when winds exceed 5 miles per hour. If feasible, half of the seed mix will be broadcast in one direction, with the other half broadcast perpendicular to the first half. A tracking dye may be added to facilitate uniform application. Certified weed-free straw will be applied at a rate of approximately 2 tons per acre immediately after seeding. This straw will either be crimped into the ground or applied with a tackifier.

### *4.4.2 Drill Seeding*

Drill seeding plants seeds using an agricultural or range seed drill at a rate of 12-14 pounds per acre, per discussions with a seed supplier and ODFW. The rate may be adjusted depending on the recommendations of the actual seed supplier.

## 4.5 Seed Mixes and Shrub Plantings

One grassland seed mix (Table 3) and one shrub mix (Table 4) are being proposed for revegetation efforts at WREFI. The Certificate Holder assumes that reasonable substitutions can be made to the seed mixes, with approval from ODOE, based on seed availability at the time of procurement. Additionally, planting of shrubs is being proposed for revegetation of temporarily disturbed shrub-steppe habitats. Similarly, the Certificate Holder assumes that seeding of shrub species can occur if plant stock is unavailable or too costly.

Grassland Seed Mix #1 is intended for use in revegetation efforts throughout WREFI. It contains only grasses, as recommended by ODFW, in order to maximize flexibility for weed control.

**Table 3. Grassland Seed Mix #1**

| Common Name | *Scientific Name* | Percent of Mix |
|---|---|---|
| Bluebunch wheatgrass | *Pseudoroegneria spicata* | 50 |
| Bottlebrush squirreltail | *Elymus elymoides* | 15 |
| Sandberg's bluegrass | *Poa secunda* | 15 |
| Thickspike wheatgrass | *Elymus lanceolatus* | 20 |
| Note: This seed mix is available from BFI Native Seeds as their Columbia Plateau mix (BFI Native Seeds 2019). | | |

ODFW has discussed a preference for shrub plantings instead of including them in seed mixes. In the approximately 3.9 acres of temporarily disturbed Shrub-steppe habitat (Table 2), the Certificate Holder will prioritize plantings of basin big sagebrush and rabbitbrush. If plantings are not feasible due to availability of plant stock or cost, the Certificate Holder will notify ODOE, and shrub seeds would be added to Seed Mix #1, as appropriate, at the seeding rates noted in Table 4.

**Table 4. Shrub Seeding Rates to Supplement Grassland Seed Mix #1**

| Common Name | Scientific Name | Minimum Pounds/Acre Pure Live Seeds |
|---|---|---|
| Basin big sagebrush | *Artemisia tridentata* ssp. *tridentata* | 0.1 to 0.2 |
| Gray rabbitbrush | *Ericameria nauseosa* | 0.1 |
| Green rabbitbrush | *Chrysothamnus viscidiflorus* | 0.1 |

# 5.0 Monitoring

## 5.1 Revegetation Record

Records will be kept of revegetation efforts, both for croplands and for wildlife habitat. Records will include:

- Date construction was completed;
- Description of the affected area;
- Date revegetation was initiated; and
- Description of the revegetation effort.

The Certificate Holder will update these records periodically as revegetation work occurs and will provide ODOE with copies of these records along with submission of the monitoring report that is required by the site certificate.

## 5.2 Reference and Monitoring Sites

In order to determine if the revegetation efforts are meeting success criteria, paired monitoring and reference sites will be established. Monitoring and reference sites will be located in each of the following habitat subtypes that will be temporarily disturbed by construction of WREFI:

- Revegetated or Other Planted Grassland;
- Native Perennial Grassland;
- Exotic Annual Grassland;
- Shrub-steppe with Rabbitbrush/Snakeweed; and
- Shrub-steppe with Basin Big Sagebrush.

Reference sites are intended to represent target conditions for the revegetation effort. Vegetation within monitoring plots in revegetation areas will be compared with those in the associated reference sites to measure success of the required revegetation activities for WREFI.

### *5.2.1 Reference Sites*

Prior to operations, reference sites—areas of habitat quality similar to those found prior to disturbance at the areas to be revegetated—will be identified in consultation with ODOE and ODFW. Reference sites will be chosen with consideration to land use patterns, soil types, terrain, and presence of noxious weeds. Alternate reference sites may be chosen in consultation with ODOE and ODFW if land use changes, wildfire, or other disturbance makes a chosen reference site no longer representative of target conditions.

Five reference sites will be identified to represent the range of disturbed wildlife habitat areas for which revegetation is required. One reference site will be located within each of the five habitat subtypes noted above. Proposed reference sites will be chosen based on review of:

- Aerial imagery (Google Earth 2019);
- Information from previous vegetation surveys conducted for WWEF (NWC 2014, Tetra Tech 2019);
- Local knowledge of the site by biologists who have conducted surveys within the WREFI boundaries; and
- Soil survey data (NRCS 2019).

Following selection of proposed reference sites, a site visit will be conducted at the appropriate time to evaluate baseline conditions within these reference sites. These site visits will document the following:

- Vascular plant species present;
- Native/non-native status of species present;
- Approximate percent cover of dominant species;
- Approximate percent cover of state and county-listed noxious weeds; and
- Evidence of ongoing, recent, or past disturbance.

In each of the reference sites, a permanent 50 by 100-foot sample plot will be established. Three 50-foot transects will be established within each of these permanent sample plots, perpendicular to the long side of the plot. For the grassland plots, the line-point intersect method will be used to document vegetation at 1-foot intervals along the transect line. For the shrub-steppe plots, 6-foot-wide belt transects will be established, 3 feet on each side of the transect line. All shrubs and herbaceous species occurring within these transects will be recorded and percent cover of the dominant species will be estimated.

### *5.2.2 Monitoring Sites*

Per ODFW recommendations, a minimum of one monitoring plot will be located within habitats where temporary disturbances will be less than 5 acres in size. For habitats where the impacts will be greater than 5 acres, the number of monitoring plots will be chosen to represent five percent of the total temporary disturbance area by habitat subtype and category, or a maximum of 10 monitoring plots.

The number of monitoring plots for habitat subtypes where impacts will be greater than 5 acres was determined first by multiplying the impact acreage by five percent and then converting the acreages into square feet. This square footage was then divided by 5,000, which represents the number of square feet within a proposed sample plot (50 feet by 100 feet). Table 5 presents the number of monitoring plots that will be established within each habitat subtype and category of temporary disturbance.

**Table 5. Number of Monitoring Sites to be Established within each Temporarily Disturbed Habitat Subtype**

| Habitat Category[1] | Habitat Subtype | Temporary Disturbance (Acres) | Number of Monitoring Sites |
|---|---|---|---|
| 3 | Revegetated or Other Planted Grassland | 3.3 | 1 |
| | Native Perennial Grassland | 6.5 | 2 |
| | Shrub-steppe with Rabbitbrush/Snakeweed | 2.4 | 1 |
| | Shrub-steppe with Basin Big Sagebrush | 1.5 | 1 |
| 4 | Exotic Annual Grassland | 3.8 | 1 |
| **TOTAL** | | **17.6** | **6** |

Monitoring sites within each habitat subtype will be selected using a stratified randomization process utilizing existing habitat mapping. Mile points will be assigned to each habitat subtype within the construction corridor linearly from north to south in 0.1-mile increments (CH2M 2019). A random number generator will then be used to assign monitoring locations using the 0.1-mile increments. Additional monitoring locations will be chosen, through the stratified randomization process, as alternative locations in case one of the original monitoring locations is deemed unacceptable during the first revegetation monitoring effort. Data collected during the first year of monitoring will serve as pilot data to determine if the chosen number of monitoring sites will provide results that are statistically robust. Additional monitoring sites will be added if statistical analysis of the first year's data indicates additional monitoring plots are needed.

The monitoring plot dimensions and transect spacing may need to be adjusted to account for the numerous linear features associated with WREFI whose disturbance footprint may be less than 50 feet wide. These detailed considerations for monitoring methods will be determined in consultation with ODOE and ODFW prior to implementation of monitoring.

## 5.3 Monitoring Procedures

Monitoring of the revegetation effort will be conducted by a qualified botanist or revegetation specialist; this monitoring will be done annually for 5 years, starting on the first growing season after seeding/planting.

During each assessment, revegetated areas will be compared to reference sites with regard to:

- Presence and density of noxious weeds;
- Degree of erosion;
- Vegetative density;
- Proportion of perennial native and desirable introduced plant species; and
- Species diversity and structural stage of perennial native and desirable introduced plant species.

Monitoring will not be required for areas that have been converted by the landowner to land uses that preclude meeting revegetation success criteria.

### *5.3.1 Noxious Weed Control*

A qualified investigator will be employed to annually assess noxious weed presence during the first 5 years of revegetation work and to make recommendations on noxious weed control measures. Reports will be submitted to ODOE and to ODFW following each annual inspection. Details regarding known noxious weed occurrence at WREFI, proposed noxious weed prevention, monitoring, and control of noxious weeds are available in a separate Noxious Weed Control Plan (Tetra Tech 2020).

### *5.3.2 Wildlife Habitat Recovery*

In the first growing season after planting in revegetation areas, a qualified botanist or revegetation specialist will inspect each wildlife habitat revegetation area to assess the success of revegetation measures. These assessments will be annually for the first 5 years. Monitoring reports will be submitted to the Certificate Holder, ODOE, and ODFW. Assessments will address whether, based on evaluation of monitoring and reference sites, each wildlife habitat revegetation area is trending toward meeting the success criteria described below.

Based on the fifth annual assessment, the Certificate Holder will consult with ODOE and ODFW to design an action plan for subsequent years. The Certificate Holder is obligated to revegetate and implement weed control measures in disturbed areas regardless of its ability to meet success criteria; nonetheless, the Certificate Holder may propose remedial actions and/or additional monitoring for areas that have been determined by ODOE, in consultation with ODFW, not to have met the success criteria. Revegetation efforts may in some cases be deemed to have failed, and additional mitigation may be proposed in such cases to compensate for loss of wildlife habitat,

while revegetation and weed control would continue to apply, but without application of success criteria.

## 5.4 Success Criteria

Each monitoring report will involve assessing the progress of each area of wildlife habitat disturbed during construction toward meeting revegetation objectives. Habitat quality shall be evaluated based on the success criteria listed below. Final determination of whether the Certificate Holder has met the revegetation obligations will be made by ODOE, in consultation with ODFW.

- **Native Forbs:** The average density or frequency of desirable forbs (typically native, with some site-specific exceptions) should be a minimum of 75 percent of the reference site within 5 years. Diversity of forbs on a reclaimed site should at least equal the diversity measured on the reference site within 5 years.
- **Native Shrubs:** The average density or frequency of the shrub component should be at least 50 percent of the reference site within 5 years. At least 15 percent of the shrub density or frequency should be the dominant species found on the reference site. The diversity of shrub species within the revegetated areas should at least equal the shrub species diversity measured on the reference site.
- **Native Grasses:** Revegetated sites should maintain grass species diversity and density that is at least 85 percent similar to reference sites. Native bunchgrasses should be given preference. Native grasses are to be planted at rates sufficient to achieve abundance and diversity characteristics of the grass component at the reference site.
- **Non-Native Weeds:** Every attempt should be made to prevent and control all species listed on county, state, and federal noxious weed lists. Revegetation sites should not contain a higher percentage of non-native weed cover than the reference site. All state and federal laws pertaining to noxious weeds must be followed. Highly competitive invasive species such as cheatgrass and other weedy brome grasses are prohibited in seed mixtures and should be actively controlled if any are found in the reclaimed areas.

## 5.5 Remedial Action

Remedial action options will be identified in cases where success criteria are not met, whether due to wildfire subsequent to construction of WREFI or because of lower than expected rates of germination or survival. Remedial actions may include reseeding or other measures. The investigator will make recommendations for remedial actions after each monitoring visit, and the Certificate Holder will take appropriate measures to meet the restoration objectives. The Certificate Holder will include the investigator's recommendations for remedial actions and the measures taken in that year's monitoring report. ODOE may require reseeding or other remedial actions in cases where revegetation objectives have not been met.

# 6.0 Plan Amendment

This Plan may be amended by agreement of the Certificate Holder and EFSC. Such amendments may be made without amendment of the site certificate. EFSC authorizes ODOE to agree to amendments to this plan. ODOE shall notify EFSC of all amendments, and EFSC retains the authority to approve, reject, or modify any amendment of this plan agreed to by ODOE.

# 7.0 References

BFI Native Seeds. 2019. www.bfinativeseeds.com. Accessed December 2019.

CH2M. 2019. Technical Memorandum; Revegetation Monitoring: Selection of Paired Monitoring and Reference Sites for Montague Wind Power Facility – Phase 1. Prepared for Montague Wind Power Facility, LLC. Portland, OR.

EFSC (Energy Facility Siting Council). 2017a. Site Certificate for the Wheatridge Wind Energy Facility. Issued April 28, 2017.

EFSC. 2017b. First Amended Site Certificate for the Wheatridge Wind Energy Facility. Issued July 27, 2017.

EFSC. 2018a. Second Amended Site Certificate for the Wheatridge Wind Energy Facility. Issued, November 16, 2018.

EFSC. 2018b. Third Amended Site Certificate for the Wheatridge Wind Energy Facility. Issued December 14, 2018.

EFSC. 2019. Fourth Amended Site Certificate for the Wheatridge Wind Energy Facility. Issued November 22, 2019.

Google Earth. 2019. Google Earth Pro Aerial Imagery. Accessed December 2019.

Morrow County. 2019. Morrow Country Code Enforcement Ordinance. May 2019. https://www.co.morrow.or.us/sites/default/files/fileattachments/planning/page/11881/2019_code_enforcement_final_.pdf. Accessed July 2019.

NRCS (Natural Resources Conservation Service). 2019. Web Soil Survey. U.S. Department of Agriculture, Natural Resources Conservation Service. https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm

NWC (Northwest Wildlife Consultants, Inc.). 2014. Ecological Investigations Report for the Wheatridge Wind Energy Project. Morrow and Umatilla counties, Oregon. Prepared for Wheatridge Wind Energy, LLC.

Tetra Tech. 2019. Wheatridge Wind Energy Facility 2019 Rare Plant Survey Report. September. Prepared for Wheatridge Wind Energy, LLC.

Tetra Tech. 2020a. Noxious Weed Control Plan for the Wheatridge Renewable Energy Facility I. Prepared for Wheatridge Wind Energy, LLC. Portland, OR.

Tetra Tech. 202020b. Wheatridge Wind Energy Facility Habitat Mitigation Plan. Prepared for Wheatridge Wind Energy, LLC and Wheatridge Wind II, LLC. Portland, OR.

# Wheatridge Renewable Energy Facility II Revegetation Plan

**Prepared for**
**Wheatridge Wind II, LLC**

**Prepared by**

TETRA TECH

**April 2020**

Effective Date: Wheatridge Renewable Energy Facility II Site Certificate Effective Date

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# 1.0 Introduction

This Revegetation Plan (Plan) has been prepared for the Wheatridge Renewable Energy Facility II (WREFII) West, a 200-megawatt (MW) wind energy facility in Morrow County. Wheatridge Wind II, LLC (Certificate Holder) holds the site certificate for the WREFII. WREFII has areas of overlapping Site Boundary and shared related and supporting facilities with Wheatridge Renewable Energy Facility I (WREFI; Wheatridge Wind Energy, LLC is the certificate holder).

The two facilities were originally permitted as one facility, the Wheatridge Wind Energy Facility (WWEF). WWEF was granted approval of a site certificate by the Oregon Department of Energy's (ODOE) Energy Facility Siting Council (EFSC) on April 28, 2017 (EFSC 2017a) consisting of facilities in north Morrow (Wheatridge West) and Umatilla (Wheatridge East) counties[1]. Wheatridge West began construction in January 2020.

Prior to operation, but after construction had commenced, WWEF was split into WREFI and WREFII. WREFI is a 100-MW wind energy facility within the Wheatridge West portion of the WWEF. WREF II is a 400-MW wind energy and 150-MW solar energy and battery storage facility within Wheatridge West and Wheatridge East. Of the 400 MW of wind energy in WREFII, 200 MW is located within Wheatridge West and is referred to as WREFII West This Plan has been prepared for WREFII West, but reflects the plan prepared for Wheatridge West as part of pre-construction compliance in coordination with, and approved by, ODOE and Morrow County. The Certificate Holder will amend this Plan or prepare separate revegetation plans for the remaining portions of WREFII prior to construction of those facilities.

# 2.0 Pre-Construction Compliance

This plan addresses the following pre-construction conditions of the Fourth Amended Site Certificate for the WWEF (EFSC 2019):

> ***PRE-SP-02*** *Prior to construction, the certificate holder shall ensure that the final Revegetation Plan includes a program to protect and restore agricultural soils temporarily disturbed during facility construction. As described in the final order, agriculture soils shall be properly excavated, stored, and replaced by soil horizon. Topsoil shall be preserved and replaced. The Revegetation Plan shall be finalized pursuant to Fish and Wildlife Habitat Condition 11 (PRE-FW-05).*
>
> ***PRE-FW-05*** *Before beginning construction, the certificate holder shall prepare and receive approval of a final Revegetation Plan, provided as Attachment C to this order, from the department, in consultation with Umatilla and Morrow counties and ODFW. The certificate holder*

[1] The site certificate for the WWEF was amended five times, including the addition of solar energy generation and battery storage components and splitting the facility into WREFI and WREFII (EFSC 2017b, EFSC 2018a, EFSC 2018b, EFSC 2019).

*shall implement the requirements of the approved plan during all phases of construction and operation of the facility.*

The details of this plan were developed in consultation with personnel from the Oregon Department of Fish and Wildlife (ODFW), ODOE, and Morrow County Weed Control Department. This plan describes the practices and standards for restoring those areas temporarily disturbed during construction of WREFII, including planting methods, monitoring requirements, success criteria, and adaptive management (in case success criteria are not met); it does not apply to areas permanently occupied by WREFII. Throughout construction and revegetation activities, the Certificate Holder will take appropriate actions to prevent the spread of noxious weeds (as identified in the Morrow Count 2019). Where appropriate, and pursuant to consultation with the Morrow County Weed Control Supervisor, monitoring of noxious weeds and the effectiveness of weed control/eradication efforts will be performed concurrently with the revegetation monitoring described in this document. A stand-alone Noxious Weed Control Plan has also been prepared for pre-construction compliance (Tetra Tech 2020a). Information on Morrow County-listed noxious weeds, noxious weeds observed during surveys, and treatment and monitoring of noxious weeds are included in the Noxious Weed Control Plan (Tetra Tech 2020a).

# 3.0 Site Description

WREFII is located in Morrow County, Oregon. It lies within the Columbia Plateau Ecoregion at elevations from approximately 800 to 2,800 feet. WREFII is sited entirely on private land and primarily in agricultural land used for growing dryland wheat. Native vegetation has been modified not only through agricultural conversion, but also through historical and current livestock grazing, by changes in fire regimes, and by the presence of exotic grasses and other vegetation.

Habitats within WREFII boundary include Developed (subtypes include Dryland Wheat and Other Developed), Grassland (Exotic Annual, Revegetated Grassland, and Native Perennial), and Shrub-steppe (Basin Big Sagebrush and Snakeweed/Rabbitbrush). The Habitat Mitigation Plan (HMP; Tetra Tech 2020b) details the acres of each habitat subtype that will be temporarily and permanently disturbed during construction and operation of the WREFII. For purposes of this plan, disturbance to Developed-Dryland Wheat and Developed-Other habitat subtypes are grouped together. Developed-Other habitat subtypes include farm and ranch homes and related infrastructure, roads, quarries, livestock facilities, and other areas associated with human activity. Disturbance to all other habitat subtypes are collectively referred to as wildlife habitat.

## 3.1 Temporary Disturbance to Dryland Wheat and Other

Temporary disturbance to areas identified as Developed-Dryland Wheat and Developed-Other habitat subtypes are shown in Table 1. Figures depicting the location of these temporary disturbances are available in the HMP (Tetra Tech 2020b). Restoration of Developed-Other habitat subtypes will be determined on a case-by-case basis and is not covered further in this plan. Temporary disturbances to Developed-Dryland Wheat will be restored as described in Section 4.3.

**Table 1. Summary of Temporary Disturbances to Cropland**

| Habitat Subtype (Category 6 Habitat) | Temporary Disturbance (Acres) |
|---|---|
| Dryland Wheat | 451.7 |
| Developed-Other | 1.0 |
| **TOTAL** | **452.7** |

## 3.2 Temporary Impacts to Wildlife Habitat

Temporary disturbance to areas identified as wildlife habitat are shown in Table 2. Figures depicting the locations of these temporary disturbances are available in the HMP (Tetra Tech 2020b). These temporary disturbances will be restored as described in Section 4.4.

**Table 2. Summary of Temporary Disturbances to Wildlife Habitat**

| Habitat Category | Habitat Subtype | Temporary Disturbance (Acres) |
|---|---|---|
| 2 | Revegetated or Other Planted Grassland | 87.4 |
| | Native Perennial Grassland | 18.3 |
| | Exotic Annual Grassland | 10.3 |
| 3 | Revegetated or Other Planted Grassland | 41.1 |
| | Native Perennial Grassland | 26.1 |
| 4 | Exotic Annual Grassland | 13.6 |
| | Shrub-steppe with Rabbitbrush/Snakeweed | 0.3 |
| **TOTAL** | | **197.1** |

# 4.0 Revegetation Methods

This plan addresses revegetation methods for both Dryland Wheat and wildlife habitat. Revegetation will begin as soon as feasible after construction completes. Seeding and planting will be done in a timely manner and in the appropriate season. Restoration of Dryland Wheat will be designed in consultation with the landowner.

## 4.1 Roles and Responsibilities

The Certificate Holder has identified a construction contractor to build WREFII. The construction contractor will be responsible for implementing the measures in the National Pollutant Discharge Elimination System (NPDES) 1200-C permit, as well as the revegetation activities discussed herein during and immediately after construction. A qualified botanist or revegetation specialist will be responsible for monitoring and reporting on revegetation success. Remedial revegetation actions, if needed during the operation phase, will be performed by a qualified contractor. The Certificate

Holder will be responsible for ensuring that all contractors perform work in accordance with permit requirements and all agreed upon methods for revegetation.

## 4.2 Site Preparation

In areas where soil is removed during construction, the following measures will be taken where appropriate:

- The topsoil will be stockpiled separately from the subsurface soils.
- The conserved soil will be put back in place as topsoil prior to revegetation activities.
- Prior to seeding and/or planting of revegetation areas, soils will be prepared to facilitate revegetation success.
- Soil preparation will involve standard, commonly used methods, and will take into account all relevant site-specific factors, including slope, size of area, and erosion potential.
- Topsoil and other soils from noxious weed infested areas will not be moved outside of the infested areas and will be returned to its previous location during reclamation activities;
- Soils from weed infested areas may be treated with a pre-emergent herbicide prior to initiation of revegetation efforts, depending on site-specific conditions;
- Movement of topsoil and other soils from non-infested areas will be limited to eliminate the transport of weed seeds, roots, or rhizomes.
- In general, the soil needs to be prepared into a firm, fine-textured seedbed that is relatively free of debris before seeding or planting. Shallow tilling with a disc, followed by a harrow or drag if necessary, can typically achieve this. If replaced soil is too soft, then seeds may be buried too deep to properly germinate; a roller or culti-packer should be used to pack down the soil.
- In non-cropland areas, site complexity should be considered during soil preparation. For instance, it may be desirable to purposely create an uneven, patchy site that allows for depressions and other microsites that result in small variations in aspect and moisture holding to promote complexity.
- The construction contractor will use mulching and other appropriate practices, as required by the NPDES 1200-C permit, to control erosion and sediment during construction and revegetation work.

## 4.3 Restoration of Cropland

Croplands will be reseeded with the appropriate crop or maintained as fallow in consultation with the landowner or farm operator. The construction contractor will also consult with the landowner or farm operator to determine seed mix, application methods, and rates for seed and fertilizer. Success of cropland revegetation will have been achieved when production of the revegetated area is comparable to that of adjacent, non-disturbed croplands of the same type. Success determination will involve consultation with the landowner or farm operator, and the Certificate Holder will report to ODOE on the success of cropland restoration efforts. Noxious weed control is necessary for successful revegetation of croplands and will be implemented per the methods described in the Noxious Weed Control Plan (Tetra Tech 2020a).

Soil compaction is a concern for restoring agricultural soils to their pre-construction productivity. During construction of temporary facilities, the Certificate Holder would excavate and store soils by soil horizon, so that soils could be replaced and restored appropriately, including replacing topsoil. During post-construction restoration of temporary impacts to agricultural areas, the Certificate Holder would loosen agricultural soil by mechanical scarification (tilling or ripping the soil) to an appropriate depth to reduce the potential effects of compaction. Soil amendment, by addition of organic matter (compost), may also be necessary to alleviate compaction. The measures outlined in Section 4.2 will be performed in cropland where applicable.

## 4.4 Restoration of Wildlife Habitat

All wildlife habitat will be reseeded with either 1) a mix of native or non-invasive, non-persistent non-native grasses; or 2) a mix of native or non-invasive, non-persistent non-native grasses, forbs, and shrubs. The seed mixes and application rates described in Section 4.5 have been determined in consultation with ODFW, and included consideration of the soil types, erosion potential, and growing conditions found near WREFII. The seed mixes have been approved by ODFW (July 31, 2019) and seeds will be obtained from a reputable supplier in compliance with the Oregon Seed Law (Oregon Administrative Rule 603-056).

The methods used and timing of planting will be appropriate to the seed mixes, weather conditions, and site conditions (including area size, slope, and erosion potential) based upon consultation with ODFW and the Morrow County Weed Control Supervisor. Preparation of disturbed ground may include replacing lost topsoil, or chemical or mechanical weed control per the Noxious Weed Control Plan (Tetra Tech 2020a). Following soil preparation (Section 4.2), seed mixes in non-cropland areas will be applied through broadcast or drill seeding.

During construction, the construction contractor will implement site stabilization measures, including seeding of temporarily disturbed areas according to the Certificate Holder's NPDES 1200-C permit. Approximately 6 months prior to commercial operation, the Certificate Holder and construction contractor will meet with ODFW, ODOE, and Morrow County Weed Control Authority personnel to review the actual extent and conditions of temporarily impacted areas, confirm the revegetation methods to be implemented, and to revisit reference areas as necessary.

### *4.4.1 Broadcast Seeding*

In this method, the seed mix will be broadcast at a rate of 20-24 pounds per acre, per discussions with a seed supplier and ODFW. The rate may be adjusted depending on the recommendations of the actual seed supplier. Broadcasting should not be utilized when winds exceed 5 miles per hour. If feasible, half of the seed mix will be broadcast in one direction, with the other half broadcast perpendicular to the first half. A tracking dye may be added to facilitate uniform application. Certified weed-free straw will be applied at a rate of approximately 2 tons per acre immediately after seeding. This straw will either be crimped into the ground or applied with a tackifier.

### *4.4.2 Drill Seeding*

Drill seeding plants seeds using an agricultural or range seed drill at a rate of 12-14 pounds per acre, per discussions with a seed supplier and ODFW. The rate may be adjusted depending on the recommendations of the actual seed supplier.

## 4.5 Seed Mixes and Shrub Plantings

Two seed mixes are being proposed for revegetation efforts. The Certificate Holder assumes that reasonable substitutions can be made to the seed mixes included in Table 3 and Table 4, with approval from ODOE, based on seed availability at the time of procurement. Additionally, planting of shrubs is being proposed for revegetation of temporarily disturbed shrub-steppe habitats. Similarly, the Certificate Holder assumes that seeding of shrub species can occur if plant stock is unavailable or too costly.

Grassland Seed Mix #1 is intended for use in revegetation efforts throughout WREFII. It contains only grasses, as recommended by ODFW, in order to maximize flexibility for weed control.

**Table 3. Grassland Seed Mix #1**

| Common Name | *Scientific Name* | Percent of Mix |
|---|---|---|
| Bluebunch wheatgrass | *Pseudoroegneria spicata* | 50 |
| Bottlebrush squirreltail | *Elymus elymoides* | 15 |
| Sandberg's bluegrass | *Poa secunda* | 15 |
| Thickspike wheatgrass | *Elymus lanceolatus* | 20 |
| Note: This seed mix is available from BFI Native Seeds as their Columbia Plateau mix (BFI Native Seeds 2019). | | |

Grassland Seed Mix #2 is an optional mix intended for use in the southern portions of WREFII, above 2,000 feet in elevation. This generally includes Swaggert Buttes and areas to the south of Swaggert Buttes. This seed mix contains the same grass species as Grassland Seed Mix #1, but also includes forbs. Site-specific conditions, such as presence of noxious weed infestations, may preclude this mix from being used as germination, and establishment of forbs is generally not compatible with most noxious weed control methods.

**Table 4. Grassland Seed Mix #2**

| Common Name | Scientific Name | Percent of Mix |
|---|---|---|
| Bluebunch wheatgrass | *Pseudoroegneria spicata* | 45 |
| Bottlebrush squirreltail | *Elymus elymoides* | 15 |
| Sandberg's bluegrass | *Poa secunda* | 15 |
| Thickspike wheatgrass | *Elymus lanceolatus* | 15 |
| Western yarrow | *Achillea millefolium* var. *occidentalis* | 2 |
| Shaggy fleabane | *Erigeron pumilis* | 2 |
| Desert parsley | *Lomatium dissectum* | 2 |

| Common Name | Scientific Name | Percent of Mix |
|---|---|---|
| Silky lupine | *Lupinus sericeus* | 2 |
| Lewis flax | *Linum lewisii* | 2 |
| Note: Adding in forbs will adjust the percentages for the entire mix. An example seeding rate for forbs could be: 0.25 pounds/acre for western yarrow and shaggy fleabane, 0.75 pounds/acre for desert parsley, 0.5 pounds/acre for silky lupine, and 1 pound/acre for Lewis flax. | | |

ODFW has discussed a preference for shrub plantings instead of including them in seed mixes. In the approximately 0.3 acres of temporarily disturbed Shrub-steppe habitat (Table 2), the Certificate Holder will prioritize plantings of basin big sagebrush and rabbitbrush. If plantings are not feasible due to availability of plant stock or cost, the Certificate Holder will notify ODOE, and shrub seeds would be added to either Seed Mix #1 or Seed Mix #2, as appropriate, at the seeding rates noted in Table 5.

**Table 5. Shrub Seeding Rates to Supplement Grassland Seed Mix #1 or Seed Mix #2**

| Common Name | Scientific Name | Minimum Pounds/Acre Pure Live Seeds |
|---|---|---|
| Basin big sagebrush | *Artemisia tridentata* ssp. *tridentata* | 0.1 to 0.2 |
| Gray rabbitbrush | *Ericameria nauseosa* | 0.1 |
| Green rabbitbrush | *Chrysothamnus viscidiflorus* | 0.1 |

# 5.0 Monitoring

## 5.1 Revegetation Record

Records will be kept of revegetation efforts, both for croplands and for wildlife habitat. Records will include:

- Date construction was completed;
- Description of the affected area;
- Date revegetation was initiated; and
- Description of the revegetation effort.

The Certificate Holder will update these records periodically as revegetation work occurs, and will provide ODOE with copies of these records along with submission of the monitoring report that is required by the site certificate.

## 5.2 Reference and Monitoring Sites

In order to determine if the revegetation efforts are meeting success criteria, paired monitoring and reference sites will be established. Monitoring and reference sites will be located in each of the following habitat subtypes that will be temporarily disturbed by construction of WREFII:

- Revegetated or Other Planted Grassland;
- Native Perennial Grassland;
- Exotic Annual Grassland; and
- Shrub-steppe with Rabbitbrush/Snakeweed;

Reference sites are intended to represent target conditions for the revegetation effort. Vegetation within monitoring plots in revegetation areas will be compared with those in the associated reference sites to measure success of the required revegetation activities for WREFII.

### *5.2.1 Reference Sites*

Prior to operation, reference sites—areas of habitat quality similar to those found prior to disturbance at the areas to be revegetated—will be identified in consultation with ODOE and ODFW. Reference sites will be chosen with consideration to land use patterns, soil types, terrain, and presence of noxious weeds. Alternate reference sites may be chosen in consultation with ODOE and ODFW if land use changes, wildfire, or other disturbance makes a chosen reference site no longer representative of target conditions.

Five reference sites will be identified to represent the range of disturbed wildlife habitat areas for which revegetation is required. Two reference sites will be located within native perennial grassland habitat, and one reference site will be located within each of the other three habitat subtypes noted above. One of the native perennial grassland reference sites will be located in the northern portion of WREFII and one will be located in the southern portion of WREFII to capture sites at both lower and higher elevation. Proposed reference sites will be chosen based on review of:

- Aerial imagery (Google Earth 2019);
- Information from previous vegetation surveys conducted for WREFII (NWC 2014, Tetra Tech 2019);
- Local knowledge of the site by biologists who have conducted surveys within WREFII boundaries; and
- Soil survey data (NRCS 2019).

Final selection of proposed reference sites will include a site visit will be conducted at the appropriate time to evaluate baseline conditions within these reference sites. These site visits will document the following:

- Vascular plant species present;
- Native/non-native status of species present;
- Approximate percent cover of dominant species;
- Approximate percent cover of state and county-listed noxious weeds; and

- Evidence of ongoing, recent, or past disturbance.

In each of the reference sites, a permanent 50 by 100-foot sample plot will be established. Three 50-foot transects will be established within each of these permanent sample plots, perpendicular to the long side of the plot. For the grassland plots, the line-point intersect method will be used to document vegetation at 1-foot intervals along the transect line. For the shrub-steppe plots, 6-foot-wide belt transects will be established, 3 feet on each side of the transect line. All shrubs and herbaceous species occurring within these transects will be recorded and percent cover of the dominant species will be estimated.

### *5.2.2 Monitoring Sites*

Per ODFW recommendations, a minimum of one monitoring plot will be located within habitats where temporary disturbances will be less than 5 acres in size. For habitats where the impacts will be greater than 5 acres, the number of monitoring plots will be chosen to represent five percent of the total temporary disturbance area by habitat subtype and category, or a maximum of 10 monitoring plots.

The number of monitoring plots for habitat subtypes where impacts will be greater than 5 acres was determined first by multiplying the impact acreage by five percent and then converting the acreages into square feet. This square footage was then divided by 5,000, which represents the number of square feet within a proposed sample plot (50 feet by 100 feet). Table 6 presents the number of monitoring plots that will be established within each habitat subtype and category of temporary disturbance. The categories in Table 6 are different than the categories shown in Table 2, as the categories in Table 6 represent the habitat category attributed during habitat surveys, prior to overlaying mule deer winter range, which modified some Category 3 and Category 4 habitat to a Category 2 habitat for purposes of the HMP (Tetra Tech 2020b). Using the categories from the habitat survey groups the habitat subtypes by vegetation condition (see the habitat categorization matrix in the HMP), which is more appropriate for revegetation monitoring.

**Table 6. Number of Monitoring Sites to be Established within each Temporarily Disturbed Habitat Subtype**

| Habitat Category[1] | Habitat Subtype | Temporary Disturbance (Acres) | Number of Monitoring Sites |
|---|---|---|---|
| 3 | Revegetated or Other Planted Grassland | 128.4 | 10 |
| | Native Perennial Grassland | 44.4 | 10 |
| 4 | Exotic Annual Grassland | 23.9 | 10 |
| | Shrub-steppe with Rabbitbrush/Snakeweed | 0.3 | 1 |
| **TOTAL** | | **197.1** | **31** |

1. Without mule deer winter range modification.

Monitoring sites within each habitat subtype will be selected using a stratified randomization process utilizing existing habitat mapping. Mile points will be assigned to each habitat subtype within the construction corridor linearly from north to south in 0.1-mile increments (CH2M 2019). A random number generator will then be used to assign monitoring locations using the 0.1-mile increments. Additional monitoring locations will be chosen, through the stratified randomization process, as alternative locations in case one of the original monitoring locations is deemed unacceptable during the first revegetation monitoring effort. Data collected during the first year of monitoring will serve as pilot data to determine if the chosen number of monitoring sites will provide results that are statistically robust. Additional monitoring sites will be added if statistical analysis of the first year's data indicates additional monitoring plots are needed.

The monitoring plot dimensions and transect spacing may need to be adjusted to account for the numerous linear features associated with WREFII whose disturbance footprint may be less than 50 feet wide. These detailed considerations for monitoring methods will be determined in consultation with ODOE and ODFW prior to implementation of monitoring.

## 5.3 Monitoring Procedures

Monitoring of the revegetation effort will be conducted by a qualified botanist or revegetation specialist; this monitoring will be done annually for 5 years, starting on the first growing season after seeding/planting.

During each assessment, revegetated areas will be compared to reference sites with regard to:

- Presence and density of noxious weeds;
- Degree of erosion;
- Vegetative density;
- Proportion of perennial native and desirable introduced plant species; and
- Species diversity and structural stage of perennial native and desirable introduced plant species.

Monitoring will not be required for areas that have been converted by the landowner to land uses that preclude meeting revegetation success criteria.

### *5.3.1 Noxious Weed Control*

A qualified investigator will be employed to annually assess noxious weed presence during the first 5 years of revegetation work and to make recommendations on noxious weed control measures. Reports will be submitted to ODOE and to ODFW following each annual inspection. Details regarding known noxious weed occurrence at WREFII, proposed noxious weed monitoring, and control of noxious weeds are available in a separate Noxious Weed Control Plan (Tetra Tech 2020b).

### *5.3.2 Wildlife Habitat Recovery*

In the first growing season after planting in revegetation areas, a qualified botanist or revegetation specialist will inspect each wildlife habitat revegetation area to assess the success of revegetation measures. These assessments will be annually for the first 5 years. Monitoring reports will be submitted to the Certificate Holder, ODOE, and ODFW. Assessments will address whether, based on evaluation of monitoring and reference sites, each wildlife habitat revegetation area is trending toward meeting the success criteria described below.

Based on the fifth annual assessment, the Certificate Holder will consult with ODOE and ODFW to design an action plan for subsequent years. The Certificate Holder is obligated to revegetate and implement weed control measures in disturbed areas regardless of its ability to meet success criteria; nonetheless, the Certificate Holder may propose remedial actions and/or additional monitoring for areas that have been determined by ODOE, in consultation with ODFW, not to have met the success criteria. Revegetation efforts may in some cases be deemed to have failed, and additional mitigation may be proposed in such cases to compensate for loss of wildlife habitat, while revegetation and weed control would continue to apply, but without application of success criteria.

## 5.4 Success Criteria

Each monitoring report will involve assessing the progress of each area of wildlife habitat disturbed during construction toward meeting revegetation objectives. Habitat quality shall be evaluated based on the success criteria listed below. Final determination of whether the Certificate Holder has met the revegetation obligations will be made by ODOE, in consultation with ODFW.

- **Native Forbs:** The average density or frequency of desirable forbs (typically native, with some site-specific exceptions) should be a minimum of 75 percent of the reference site within 5 years. Diversity of forbs on a reclaimed site should at least equal the diversity measured on the reference site within 5 years.
- **Native Shrubs:** The average density or frequency of the shrub component should be at least 50 percent of the reference site within 5 years. At least 15 percent of the shrub density or frequency should be the dominant species found on the reference site. The diversity of shrub species within the revegetated areas should at least equal the shrub species diversity measured on the reference site.
- **Native Grasses:** Revegetated sites should maintain grass species diversity and density that is at least 85 percent similar to reference sites. Native bunchgrasses should be given preference. Native grasses are to be planted at rates sufficient to achieve abundance and diversity characteristics of the grass component at the reference site.
- **Non-Native Weeds:** Every attempt should be made to prevent and control all species listed on county, state, and federal noxious weed lists. Revegetation sites should not contain a higher percentage of non-native weed cover than the reference site. All state and federal laws pertaining to noxious weeds must be followed. Highly competitive invasive species

such as cheatgrass and other weedy brome grasses are prohibited in seed mixtures and should be actively controlled if any are found in the reclaimed areas.

### 5.5 Remedial Action

Remedial action options will be identified in cases where success criteria are not met, whether due to wildfire subsequent to construction or because of lower than expected rates of germination or survival. Remedial actions may include reseeding or other measures. The investigator will make recommendations for remedial actions after each monitoring visit, and the Certificate Holder will take appropriate measures to meet the restoration objectives. The Certificate Holder will include the investigator's recommendations for remedial actions and the measures taken in that year's monitoring report. ODOE may require reseeding or other remedial actions in cases where revegetation objectives have not been met.

## 6.0 Plan Amendment

This Plan may be amended by agreement of the Certificate Holder and EFSC. Such amendments may be made without amendment of the site certificate. EFSC authorizes ODOE to agree to amendments to this plan. ODOE shall notify EFSC of all amendments, and EFSC retains the authority to approve, reject, or modify any amendment of this plan agreed to by ODOE.

## 7.0 References

BFI Native Seeds. 2019. www.bfinativeseeds.com. Accessed December 2019.

CH2M. 2019. Technical Memorandum; Revegetation Monitoring: Selection of Paired Monitoring and Reference Sites for Montague Wind Power Facility – Phase 1. Prepared for Montague Wind Power Facility, LLC. Portland, OR.

EFSC (Energy Facility Siting Council). 2017a. Site Certificate for the Wheatridge Wind Energy Facility. Issued April 28, 2017.

EFSC. 2017b. First Amended Site Certificate for the Wheatridge Wind Energy Facility. Issued July 27, 2017.

EFSC. 2018a. Second Amended Site Certificate for the Wheatridge Wind Energy Facility. Issued, November 16, 2018.

EFSC. 2018b. Third Amended Site Certificate for the Wheatridge Wind Energy Facility. Issued December 14, 2018.

EFSC. 2019. Fourth Amended Site Certificate for the Wheatridge Wind Energy Facility. Issued November 22, 2019.

Google Earth. 2019. Google Earth Pro Aerial Imagery. Accessed December 2019.

Morrow County. 2019. Morrow Country Code Enforcement Ordinance. May 2019. https://www.co.morrow.or.us/sites/default/files/fileattachments/planning/page/11881/2019_code_enforcement_final_.pdf. Accessed July 2019.

NRCS (Natural Resources Conservation Service). 2019. Web Soil Survey. U.S. Department of Agriculture, Natural Resources Conservation Service. https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm

NWC (Northwest Wildlife Consultants, Inc.). 2014. Ecological Investigations Report for the Wheatridge Wind Energy Project. Morrow and Umatilla counties, Oregon. Prepared for Wheatridge Wind Energy, LLC.

NWC and Tetra Tech (Northwest Wildlife Consultants and Tetra Tech, Inc.). 2019. Wheatridge Wind Energy Facility Final Habitat Mitigation Plan. Prepared for NextEra Energy Resources, LLC. Portland, OR.

Tetra Tech (Tetra Tech, Inc.). 2019. Wheatridge Wind Energy Facility 2019 Rare Plant Survey Report. September. Prepared for Wheatridge Wind Energy, LLC.

Tetra Tech. 2020a. Noxious Weed Control Plan for the Wheatridge Renewable Energy Facility II. Prepared for Wheatridge Wind II, LLC. Portland, OR.

Tetra Tech. 2020b. Habitat Mitigation Plan for the Wheatridge Wind Energy Facility. Prepared for Wheatridge Wind Energy, LLC and Wheatridge Wind II, LLC. Portland, OR.

# Noxious Weed Control Plan for the Wheatridge Renewable Energy Facility I

**Prepared for**
**Wheatridge Wind Energy, LLC**

**Prepared by**

TETRA TECH

**April 2020**
Effective Date: Wheatridge Renewable Energy Facility I Site Certificate Effective Date

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# 1.0 Introduction

This Noxious Weed Plan (Plan) has been prepared for the Wheatridge Renewable Energy Facility I (WREFI), a 100-MW wind energy facility in Morrow County. Wheatridge Wind Energy, LLC (Certificate Holder) holds the site certificate for WREFI. WREFI has areas of overlapping Site Boundary and shared related and supporting facilities with Wheatridge Renewable Energy Facility II (WREFII).

The two facilities were originally permitted as one facility, the Wheatridge Wind Energy Facility (WWEF). WWEF was granted approval of a site certificate by the Oregon Department of Energy's (ODOE) Energy Facility Siting Council (EFSC) on April 28, 2017 (EFSC 2017a) consisting of facilities in north Morrow (Wheatridge West) and Umatilla (Wheatridge East) counties[1]. Wheatridge West began construction in January 2020.

Prior to operation but after construction had commenced, WWEF was split into WREFI and WREF II. This Plan has been prepared for WREFI but reflects the plan prepared for Wheatridge West as part of pre-construction compliance in coordination with and approved by the ODOE and Morrow County.

Noxious weed species can adversely affect the structure, composition, and success of revegetation efforts associated with construction-related temporary disturbances. The intent of this Plan is to provide clear methods to prevent the introduction and spread of designated noxious weeds from the construction and operation of WREFI, to control existing populations of noxious weeds within construction areas, and to monitor efforts to prevent and control noxious weeds. The Certificate Holder and its contractors will be responsible for implementing the methods detailed in this Plan.

# 2.0 Pre-Construction Compliance

## 2.1 Site Certificate Conditions

The Noxious Weed Control Plan addresses the following pre-construction condition of the Fourth Amended Site Certificate for WWEF (EFSC 2019):

> ***PRE-LU-03*** *Before beginning construction, the certificate holder shall prepare a Weed Control Plan that is consistent with Morrow and Umatilla County weed control requirements to be approved by the department. The department shall consult with Morrow and Umatilla counties and ODFW. The final plan must be submitted to the department no less than 30 days prior to the beginning of construction. The certificate holder shall implement the requirements of the approved plan during all phases of construction and operation of the facility.*

[1] The site certificate for the WWEF was amended five times, including the addition of solar energy generation and battery storage components and splitting the facility into WREFI and WREFII (EFSC 2017b, 2018a, 2018b, 2019).

## 2.2 Regulatory Framework

### *2.2.1 State of Oregon*

In Oregon, noxious weeds are defined under Oregon Revised Statutes (ORS) 569.175 as "terrestrial, aquatic, or marine plants designated by the Oregon State Weed Board (OSWB) under ORS 569.615 as among those representing the greatest public menace and as a top priority for action by weed control programs." Noxious weeds have been declared by ORS 569.350 as a menace to public welfare, and control of these plants is the responsibility of private landowners and operators, as well as county, state, and federal governments.

The OSWB was established under ORS 561.650. It provides direction to control noxious weeds at the state level and develops and maintains the State Noxious Weed List. OSWB and the Oregon Department of Agriculture (ODA) classify noxious weeds in Oregon in accordance with the ODA Noxious Weed Classification System (ODA 2019). There are three designations under the State's system:

- **Class A State Listed Noxious Weed:** A weed of known economic importance which occurs in the state in small enough infestations to make eradication or /containment possible; or is not known to occur in Oregon, but its presence in neighboring states makes future occurrence seem imminent.
    - **Recommended Action:** Infestations are subject to eradication or intensive control when and where found.
- **Class B State Listed Noxious Weed:** A weed of economic importance that is regionally abundant but may have limited distribution in some counties.
    - **Recommended Action:** Limited to intensive control at the state, county, or regional level as determined on a site-specific, case-by-case basis. Where implementation of a fully integrated statewide management plan is not feasible, biological control (when available) shall be the primary control method.
- **Class T Designated State Noxious Weeds:** Priority noxious weed species selected and designated by the OSWB as the focus of prevention and control actions by the Noxious Weed Control Program. T-designated noxious weeds are selected annually from either the A or B list and the ODA is directed to develop and implement a statewide management plan for these species.

### *2.2.2 Morrow County*

The Morrow County Code Enforcement Ordinance establishes procedures for enforcing Morrow County Code through the authority granted to general law counties by ORS Chapter 203. Section 11 of the county ordinance establishes Morrow County as a weed control district, defines what is considered a noxious weed or weed of economic importance, identifies the responsibility of private

land owners to control weeds, and outlines the authority of the weed control district and Morrow County Weed Coordinator to enforce the ordinance.

Morrow County has its own weed classification system that differs from the state. Morrow County defines two classifications of weeds:

- **Morrow County A List:** Noxious weeds. Any plant that is determined by the County Weed Advisory Board, and so declared by the County Board of Commissioners to be injurious to public health, crops, livestock, land, or property under provisions of Oregon State Statute and thus mandated for control.
- **Morrow County B List:** Weeds of economic importance. Weeds of limited distribution in the county and subject to intensive control or eradication where feasible.

# 3.0 ODA and Morrow County Weeds Lists

The ODA lists 46 Class A species and 92 Class B species for the state (ODA 2019). Morrow County specifically recognizes 37 species of noxious weeds (Table 1; Morrow County 2019). Although, not all of the Morrow County listed noxious weeds noted in Table 1 occur within or near WREFI, the Certificate Holder and its contractors should be aware of the entire list while monitoring and controlling weeds. Noxious weeds known to occur within or near WREFI are discussed in Section 4.0.

**Table 1. Morrow County Weed Department Weed Lists and Classifications**

| Scientific Name | Common Name | Morrow County Classification |
|---|---|---|
| *Butomus umbellatus* | flowering rush | A |
| *Cardaria* (*Lepidium*) *draba* | whitetop (hoary cress) | A |
| *Carduus acanthoides* | plumeless thistle | A |
| *Carduus nutans* | musk thistle | A |
| *Centaurea solstitialis* | yellow starthistle | A |
| *Centromadia* (*Hemizonia*) *pungens* subsp. *pungens* | spikeweed | A |
| *Chondrilla juncea* | rush skeletonweed | A |
| *Crupina vulgaris* | common crupina | A |
| *Cynoglossum officinale* | houndstongue | A |
| *Euphorbia esula* | leafy spurge | A |
| *Iris pseudacorus* | yellow flag iris | A |
| *Linaria dalmatica* | dalmatian toadflax | A |
| *Linaria vulgaris* | yellow toadflax | A |
| *Lythrum salicaria* | purple loosestrife | A |
| *Onopordum acanthium* | scotch thistle | A |

| Scientific Name | Common Name | Morrow County Classification |
|---|---|---|
| *Salvia aethiopis* | Mediterranean sage | A |
| *Senecio jacobaea* | tansy ragwort | A |
| *Acroptilon repens* | Russian knapweed | B |
| *Aegilops cylindrica* | jointed goatgrass | B |
| *Avena fatua* | wild oats | B |
| *Bassia* (*Kochia*) *scoparia* | kochia | B |
| *Centaurea diffusa* | diffuse knapweed | B |
| *Centaurea stoebe* subsp. *micranthos* | spotted knapweed | B |
| *Cicuta douglasii* | water hemlock | B |
| *Cirsium arvense* | Canada thistle | B |
| *Conium maculatum* | poison hemlock | B |
| *Convolvulus arvensis* | field bindweed | B |
| *Cuscuta* spp. | field dodder | B |
| *Euphorbia myrsinites* | myrtle spurge | B |
| *Hypericum perforatum* | St. Johnswort | B |
| *Lepidium latifolium* | perennial pepperweed | B |
| *Secale cereale* | cereal rye | B |
| *Sonchus arvensis* | perennial sowthistle | B |
| *Sorghum halepense* | johnsongrass | B |
| *Taeniatherum caput-medusae* | medusahead rye | B |
| *Tribulus terrestris* | puncturevine | B |
| *Ventenata dubia* | ventenata | B |

# 4.0 Noxious Weeds Identified at WREFI

Field surveys for the state-listed threatened plant species Laurent's milkvetch (*Astragalus collinus* var. *laurentii*) were conducted for WWEF from June 29 – July 2 and July 17 – 18, 2019 (Tetra Tech 2019). Noxious weeds were also recorded during these surveys, as well as during other pre-construction biological surveys.

Table 2 identifies both state and county listed noxious weed species observed during pre-construction surveys, and their estimated frequency of occurrence. The location of these noxious weeds is shown in Figure 1.

**Table 2. Noxious Weeds Identified During Surveys at WREFI**

| Scientific Name | Common Name | State Status (ODA)[1] | Morrow County Status [2] | Frequency |
|---|---|---|---|---|
| *Aegilops cylindrica* | jointed goatgrass | B | B | One observation in vicinity of WREFI |
| *Bassia (Kochia) scoparia* | kochia | B | B | Infrequently observed in vicinity of WREFI; where found typically occurs in dense populations |
| *Centaurea diffusa* | diffuse knapweed | B | B | Common within and in vicinity of WREFI |
| *Centaurea solstitialis* | yellow starthistle | B | A | Abundant in and adjacent to southern portion of WREFI |
| *Centaurea stoebe* ssp. *micranthos* | spotted knapweed | B/T | B | Infrequently observed in southern portion of WREFI |
| *Chondrilla juncea* | rush skeletonweed | B/T | A | Infrequently observed in the vicinity of WREFI |
| *Onopordium acanthium* | Scotch thistle | B | A | One observation within vicinity of WREFI |
| *Secale cereale* | cereal rye | N/A | B | Infrequently observed within vicinity of WREFI; where found typically occurs in dense populations |

Sources: ODA 2019. Morrow County 2019.

1. ODA: A = A weed of known economic importance which occurs in the state in small enough infestations to make eradication or containment possible; or is not known to occur, but its presence in neighboring states make future occurrence in Oregon seem imminent. B = A weed of economic importance which is regionally abundant, but which may have limited distribution in some counties. T = priority targets for control.

2. Morrow County: A = Noxious Weeds. B = Weeds of Economic Importance.

# 5.0 Weed Management

This section of the Plan describes the steps the Certificate Holder will take to prevent and control the establishment and spread of noxious weed species during both construction and operation of WREFI. Noxious weed control methods for WREFI described in this Plan have been developed utilizing information from the ODA Noxious Weed Control Program and the Morrow County Weed Control Program.

The management of noxious weeds will be considered throughout all stages of construction and operation of WREFI and will include:

- **Education and Personnel Requirements:** Educating all construction personnel regarding known locations of noxious weed infestations, identification of noxious weed species, and the importance of preventive measures and treatment methods.
- **Prevention:** Implementing measures to prevent the spread of noxious weeds during construction, operation, and maintenance activities.
- **Treatment:** Treating noxious weed infestations with appropriate control methods within the most effective timeframe.

The Certificate Holder's objective is to prevent the introduction of new weed populations and the spread of existing noxious weed populations. The methods described below will be implemented to minimize the spread of noxious weeds during construction activities. New noxious weeds detected during post-construction revegetation will be considered a result of construction activities and will be controlled accordingly.

## 5.1 Education and Personnel Requirements

Prior to construction, all construction personnel will be instructed on the importance of controlling noxious weeds. As part of start-up activities, and to help facilitate the avoidance of existing infestations and identification of new infestations, the Certificate Holder or their construction contractor will provide information and training to all construction personnel regarding noxious weed identification and management. Operations and maintenance personnel will be similarly informed. The importance of preventing the spread of noxious weeds in areas not currently infested and controlling the proliferation of noxious weeds already present within or near WREFI, will be emphasized.

## 5.2 Prevention

Implementation of the following best management practices are intended to prevent the spread of noxious weeds during construction activities, revegetation efforts, and operation and maintenance activities.

- Prior to construction, areas of noxious weed infestations will be flagged to alert construction personnel to their presence;
- Limiting vehicle access to designated routes, whether existing roads or newly constructed roads, and the outer limits of construction disturbances per the final design for WREFI;
- Limiting vehicle traffic in noxious weed-infested areas;
- Cleaning construction vehicles prior to entering WREFI for the first time and upon completion of construction of WREFI at a wash station located within the laydown yard off Baseline Rd. near turbine 62 of WREFII or at a public car wash in the vicinity of WREFI;

- Cleaning vehicles and equipment associated with ground disturbance and movement of topsoil after performing work in noxious weed-infested areas and prior to performing work in non-infested areas utilizing a mobile wash station;
- Topsoil and other soils from noxious weed infested areas will not be moved outside of the infested areas and will be returned to its previous location during reclamation activities;
- Soils from infested areas may be treated with a pre-emergent herbicide prior to initiation of revegetation efforts, depending on site-specific conditions;
- Movement of topsoil and other soils from non-infested areas will be limited to eliminate the transport of weed seeds, roots, or rhizomes.
- Providing information regarding target noxious weed species at the O&M buildings;
- Treating noxious weeds via mechanical or chemical control (see Section 5.3);
- Preventing conditions favorable for noxious weed germination and spread by revegetating temporarily disturbed areas as soon as possible;
- Monitoring areas of disturbance for noxious weeds after construction (see Section 6.0), during the normal course of revegetation maintenance of temporary work spaces, and implementing control measures as appropriate;
- Revegetating the site with appropriate, local native seed or native plants; when these are not available, non-invasive and non-persistent non-native species may be used; and
- Inspecting and certifying that the seed and straw mulch used for site rehabilitation and revegetation are free of noxious weed seed and propagules.

## 5.3 Treatment

Control of noxious weeds will be implemented through mechanical or chemical control measures. The Certificate Holder will be responsible for hiring a qualified contractor to implement the treatment of noxious weeds. The Certificate Holder will ensure that noxious weed management actions will be carried out by specialists with the following qualifications:

- Experience in native plant, non-native and invasive plants, and noxious weed identification;
- Experience in noxious weed mapping;
- If chemical control is used, specialists must possess a Commercial or Public Pesticide Applicator License from the ODA or possess an Immediately Supervised Pesticide Trainee License and be supervised by a licensed applicator;
- Training in noxious weed management or Integrated Pest Management with an emphasis in noxious weeds; and
- Experience in coordination with agency and private landowners.

Existing noxious weed populations should be prevented from expanding in size and density and should not be spread to new sites. Where possible, existing populations of noxious weeds should be eradicated. If it is determined that noxious weeds have invaded areas immediately adjacent to WREFI (e.g., areas visible just beyond the outer limits of construction disturbances associated with WREFI or along access roads) as a result of construction, the Certificate Holder will contact the landowner and seek approval to treat those noxious weed populations.

Long-term weed control methods will be described in a long-term monitoring plan as described in Section 6.0. The main factor in long-term weed control is successful revegetation with non-weedy species as described in the updates to the revegetation plan (Tetra Tech 2020). As noted above, short-term noxious weed control will be done through mechanical or chemical treatment. However, it will be important to ensure that the short-term treatment does not affect the establishment of the native perennial cover that will help provide the long-term control. Additionally, early detection and control of small noxious weed populations before they can expand into larger populations is extremely important for successful weed control efforts.

Noxious weed control will continue until the disturbed areas meet the identified success criteria described in Section 6.0. Supplemental seeding of desirable species may be needed to achieve this goal. Fertilizer application will be limited in areas treated for noxious weeds, as fertilizer can stimulate the growth of noxious weeds, and the timing of revegetation activities will need to be coordinated with noxious weed treatments.

### *5.3.1 Mechanical Treatment*

Mechanical control methods rely on removal of plants, seed heads, and/or cutting roots with a shovel or other hand tools or equipment that can be used to remove, mow, or disc noxious weed populations. Hand removal of plants is also included under this treatment method. Mechanical methods are useful for smaller, isolated populations of noxious weeds). Some rhizomatous plants can spread by discing or tillage; therefore, implementation of discing will be species specific. If such a method is used in areas to be reclaimed, subsequent seeding will be conducted to re-establish desirable vegetative cover that will stabilize the soils and slow the potential re-invasion of noxious weeds. Discing or other mechanical treatments that disturb the soil surface within native habitats will be avoided in favor of herbicide application (see Section 5.3.2), which is an effective means of reducing the size of noxious weed populations as well as preventing the establishment of new infestations.

### *5.3.2 Chemical Treatments*

Chemical control can effectively remove noxious weeds through use of selective herbicides. The recommended chemical treatment and timing of chemical application for noxious weeds that have been identified during surveys at WREFI (Table 2) are presented in Table 3. The herbicides used and the timing of application will differ depending on whether the species are (1) perennial, broad-leaved, or dicot weeds (e.g., thistle and knapweeds) or (2) annual grasses or monocots (e.g., jointed goatgrass), as appropriate herbicides differ substantially between dicots and monocots.

All herbicides included in Table 3 are currently approved for use by the U.S. Environmental Protection Agency (EPA) and ODA; however, the status of herbicide approval should be checked annually. Prior to construction and every fall season during facility operation, the Certificate Holder or its contractor shall consult with the Morrow County Weed Supervisor on timing, method and application rates for each identified weed species of concern, to allow for adaptive weed management given changes in weed control effectiveness from noxious weed species tolerance to herbicide treatment over time. Results of the consultation shall be reported in the Certificate Holder's annual weed monitoring report. Any alternative control methods can be proposed by the Certificate Holder or its contractors, after consulting with the Morrow County Weed Supervisor, and included in the Certificate Holder's annual weed monitoring report.

**Table 3. Recommended Timing and Method of Control**

| Noxious Weed Species | Method and Timing of Control |
|---|---|
| *Aegilops cylindrica* (jointed goatgrass) | **Glyphosate** – Apply to actively growing plants emerged before bolt stage (i.e., stage of growth where growth is focused on seed development versus leaf development).<br>• Rate: 0.38 to 0.75 lb ae/a[1]<br>**Imazapic –** Apply pre-emergence in fall. Due to the residual effect of this herbicide, it will not be used in areas to be revegetated.<br>• Rate: 0.063 to 0.188 lb/a[1]<br>**Sulfometuron** – Apply in fall or in late winter before jointed goatgrass is 3 inches tall.<br>• Rate: 1 to 1.5 oz ai/a (1.33 to 2 oz/a)[1] |
| *Bassia (Kochia) scoparia* (Kochia) | **Aminocyclopyrachlor + chlorsulfuron** – Apply either pre-emergence (late winter/early spring) or post-emergence. Postemergence is most effective on seedlings.<br>• Rate: 4.75 to 8 oz/a[1]<br>**Chlorsulfuron –** Apply pre-emergence (late winter/early spring), or post-emergence from seedling to bolting stage of growth.<br>• Rate: 0.75 oz ai/a (1 oz/a)[1]<br>**Dicamba –** Apply in spring when seedlings are actively growing.<br>• Rate: 0.25 to 1 lb ae/a (0.5 to 2 pints/a)[1]<br>**Fluroxypyr** – Apply in spring from seedling to bolting stage of growth.<br>• Rate: 2.1 to 7.7 oz ae/a (6 to 22 o/a)[1]<br>**Glyphosate** – Apply in spring from seedling to flowering stage of growth.<br>• Rate: 1.1 to 1.7 lb ae/a[1]<br>**Hexazinone –** Apply pre-emergence in the early spring.<br>• Rate: 0.5 to 1.5 lb ai/a (2 to 6 pints/a)[1]<br>**Imazapyr –** Apply pre-emergence (late winter/early spring) or post-emergence to actively growing kochia.<br>• Rate: 0.5 to 1.5 lb ae/a (2 to 4 pints/a)[1]<br>**Metsulfuron –** Apply in spring from seedling to flowering stage of growth.<br>• Rate: 0.6 to 1.2 oz ai/a (1 to 2 oz/a)[1] |

| Noxious Weed Species | Method and Timing of Control |
|---|---|
| | **Rimsulfuron –** Apply pre-emergence (late winter/early spring) or post-emergence to kochia seedlings.<br>• Rate: 1 oz ai/a (4 oz/a)[1] |
| *Centaurea diffusa* (diffuse knapweed)<br><br>*Centaurea stoebe* ssp. *micranthos* (spotted knapweed) | **2,4-D –** Apply at the early stage of flower stem elongation (late April to early May).<br>• Rate: 1 to 2 lb ae/a[1]<br>**Aminocyclopyrachlor + chlorsulfuron** – Apply to actively growing plants in spring.<br>• Rate: 1.8 to 3.2 oz/a aminocyclopyrachlor + 0.7 to1.3 oz/a chlorsulfuron (4.5 to 8 oz/a of product)[1]<br>**Aminopyralid** – Consult label for optimum timing. Diffuse and spotted knapweed: apply to actively growing plants in fall or in spring from rosette to bolting growth stages.<br>• Rate: 1 to 1.75 oz ae/a[1]<br>**Clopyralid –** Up to the bud stage of knapweeds.<br>• Rate: 0.25 to 0.5 lb ae/a (0.66 to 1.33 pints/a)[1]<br>**Clopyralid + 2,4-D amine (Curtail) –** Apply after most rosettes emerge but before flower stem elongates.<br>• Rate: 2 to 4 quarts/a Curtail[1]<br>**Diflufenzopyr + dicamba –** Apply to rosettes.<br>• Rate: 0.26 to 0.35 lb ae/a[1]<br>**Glyphosate –** Apply to actively growing knapweed when most plants are at bud stage.<br>• Rate: 3 lb ae/a[1]<br>**Picloram –** Apply in late spring before or during flower stem elongation.<br>• Rate: 0.25 to 0.5 lb ae/a[1]<br>**Triclopyr + clopyralid –** Apply from rosette to early bolt stage when weeds are actively growing.<br>• Rate: 1.5 to 2 pints/a[1] |
| *Centaurea solstitialis* (yellow starthistle) | **2,4-D LV ester or 2,4-D amine –** Apply before flowering.<br>• Rate: 1 lb ae/a[1] in 50 gallons of water<br>**Aminocyclopyrachlor + chlorsulfuron –** Apply to actively growing plants.<br>• Rate: 1.2 to 1.8 oz/a[1] aminocyclopyrachlor + 0.5 to 0.7 oz/a chlorsulfuron (3 to 4.5 oz/a of product)<br>**Aminopyralid (Milestone) –** Apply to plants at the rosette through bolting stages.<br>• Rate: 0.75 to 1.25 oz ae/a (3 to 5 fluid oz/a Milestone)[1]<br>**Chlorsulfuron –** For best results apply to young, actively growing plants.<br>• Rate: 1.125 oz ai/a (1.5 oz/a)[1]<br>**Clopyralid –** After most rosettes have emerged but before bud formation.<br>• Rate: 0.09 to 0.375 lb ae/a (0.25 to 1 pint/a)[1]<br>**Clopyralid + 2,4-D amine (Curtail) –** Apply after most rosettes have emerged but before bud formation.<br>• Rate: 1 to 5 quarts/a Curtail[1]<br>**Dicamba –** Apply when plants are still in rosettes but before flower stems elongate.<br>• Rate: 1 to 2 lb ae/a[1] |

| Noxious Weed Species | Method and Timing of Control |
|---|---|
| | **Diflufenzopyr + dicamba –** Apply to seedlings or rosettes.<br>• Rate: 0.26 to 0.35 lb ae/a (6 to 8 oz/a)[1]<br>**Picloram –** In spring, to plants still in rosette through bud formation.<br>• Rate: 0.25 to 0.375 lb ae/a[1]<br>**Triclopyr + clopyralid –** Apply from rosette to early bolt stage when starthistle is actively growing.<br>• Rate: 1.5 to 2.5 pints/a[1] |
| *Chondrilla juncea* (rush skeletonweed) | **2,4-D or MCPA –** Apply to rosettes in the spring immediately before or during bolting.<br>• Rate: 2 lb ae/a[1]<br>**Aminocyclopyrachlor + chlorsulfuron –** Apply to actively growing plants in spring.<br>Rate: 1.8 to 3.2 oz/a[1] aminocyclopyrachlor + 0.7 to 1.3 oz/a chlorsulfuron (4.5 to 8 oz/a of product)<br>**Aminopyralid (Milestone) –** Spring or fall when rosettes are present.<br>• Rate: 1.75 oz ae/a (7 fluid oz/a Milestone)[1]<br>**Clopyralid –** Apply to rosettes in fall or up to early bolting in spring.<br>• Rate: 0.25 to 0.375 lb ae/a (0.66 to 1 pint/a)[1]<br>**Picloram –** Apply from late fall to early spring. For best results, apply just before or during bolting.<br>• Rate: 1 lb ae/a[1] |
| *Onopordum acanthium* (Scotch thistle) | **2,4-D –** spring or fall.<br>• Rate: 1.5 to 2 lb ae/a[1]<br>**Aminocyclopyrachlor + chlorsulfuron (Perspective) –** Apply to actively growing plants in spring.<br>• Rate: 1.8 to 3.2 oz/a aminocyclopyrachlor + 0.7 to 1.3 oz/a chlorsulfuron (4.5 to 8 oz/a of product)[1]<br>**Aminopyralid (Milestone)** – Apply in spring or early summer to rosettes or bolting plants or in fall to seedlings and rosettes.<br>• Rate: 0.75 to 1.25 oz ae/a (3 to 5 fl oz/a Milestone)[1]<br>**Chlorsulfuron –** Apply to young, actively growing plants.<br>• Rate: 0.75 oz ai/a (1 oz/a)[1]<br>**Clopyralid + 2,4-D amine (Curtail) –** Apply to actively growing thistle after most basal leaves emerge but before bud stage.<br>• Rate: 1 to 5 quarts/a Curtail[1]<br>**Clopyralid –** Apply up to the bud stage.<br>• Rate: 0.09 to 0.375 lb ae/a (0.25 to 1 pint/a)[1]<br>**Dicamba –** Apply before flower stalk lengthens on established plants and for seedling control. Spray fall applications to control rosettes.<br>• Rate: 0.5 to 1 lb ae/a[1]<br>**Diflufenzopyr + dicamba –** Apply to the rosettes.<br>• Rate: 0.175 to 0.35 lb ae/a (4 to 8 oz/a)[1]<br>**Glyphosate + 2,4-D –** Apply to plants in rosette stage of growth in spring or before freeze-up in fall. |

| Noxious Weed Species | Method and Timing of Control |
|---|---|
| | • Rate: Broadcast: 16 to 32 fl oz/a[1]. Spot treatment: 1 to 2% solution.<br>**Metsulfuron (Escort and others) –** Apply post-emergence to actively growing plants.<br>• Rate: Escort: 0.6 oz ai/a (1 oz/a)[1]<br>**Picloram –** Apply in the fall before plants bolt.<br>• Rate: 0.25 lb ae/a[1]<br>**Triclopyr + clopyralid –** Apply to actively growing plants from rosette to early bolt stage.<br>• Rate: 1.5 to 2 pints/a[1] |
| *Secale cereale* (cereal rye) | Consult with Morrow County Weed Supervisor.<br><br>Glyphosate can be applied post-emergence; does not provide residual weed control. |
| Sources: DiTomaso e al. 2013; Kyser et al. 2014,Prather et al. 2019.<br>[1] a = acre; ae = acid equivalent; ai = active ingredient; lb= pound; oz = ounces | |

The application of herbicides will be to identified, treatable, noxious weed infestations. The Certificate Holder or their contractors will coordinate with the Morrow County Weed Control Supervisor to determine which populations are treatable and will notify landowners of proposed herbicide use on their lands prior to application. If a noxious weed population is deemed to be untreatable (e.g., too widespread and established in an area to successfully control), the Certificate Holder will implement the prevention measures discussed in Section 5.2, except for treatment with herbicides.

#### *5.3.2.1 Herbicide Application and Handling*

Herbicide application will adhere to EPA and ODA standards. Only those herbicides that are approved by the EPA and ODA will be used. In general, application of herbicides will not occur when the following conditions exists:

- Wind velocity exceeds 15 miles per hour for granular application, or exceeds 10 miles per hour for liquid applications;
- Snow or ice covers the foliage of target species; or
- Adverse weather conditions are forecasted within the next few days.

Hand application methods (e.g., backpack spraying) may be used in roadless areas or in rough terrain. Vehicle-mounted sprayers (e.g., handgun, boom and injector) will be used mainly in open areas that are readily accessible by vehicle. Calibration checks of equipment will be conducted prior to spraying activities, as well as periodically throughout use, to ensure that appropriate application rates are achieved.

Herbicides will be transported to WREFI daily with the following stipulations:

- Only the quantity needed for that day's work will be transported.

- Concentrate will be transported in approved containers only, and in a manner that will prevent spilling, stored separately from food, clothing, and safety equipment.
- Mixing will be done off site and at a distance greater than 200 feet from open or flowing water, wetlands, or other sensitive species' habitat. No herbicides will be applied at these areas unless authorized by the appropriate regulatory agencies.
- All herbicide equipment and containers will be inspected daily for leaks.
- Herbicides use will be in accordance with all manufacture's label recommendations and warnings.

#### *5.3.2.2 Herbicide Spills and Cleanups*

All appropriate precautions will be taken to avoid herbicide spills. In the event of a spill, cleanup will be immediate. Contractors will keep spill kits in their vehicles and in an appropriate storage shed to allow for quick and effective response to spills. Items included in the spill kit will be:

- Protective clothing and gloves;
- Adsorptive clay, "kitty litter," or other commercial adsorbent;
- Plastic bags and a bucket;
- A shovel;
- A fiber brush and screw-in handle;
- A dust pan;
- Caution tape;
- Highway flares (use on existing hard-top roads only); and
- Detergent.

Response to an herbicide spill will vary with the size and location of the spill, but general procedures include:

- Stopping the leak;
- Containing the spilled material;
- Traffic control;
- Dressing the clean-up team in protective clothing;
- Cleaning up and removing the spilled herbicide, as well as the contaminated adsorptive material and soil; and
- Transporting the spilled herbicide and contaminated material to an authorized disposal site.

#### *5.3.2.3 Herbicide Spill Reporting*

All herbicide contractors will have readily available copies of the appropriate material safety data sheets for the herbicides used at their disposal and will keep copies of the material safety data sheets in the application vehicle. All herbicide spills will be reported in accordance with applicable laws and requirements. If a spill occurs, the appropriate agency and spill coordinators will be notified promptly. In case of a spill into wetlands and waterbodies, the appropriate federal, state, and county agencies will be notified immediately.

#### *5.3.2.4 Special Considerations*

The Certificate Holder will provide special consideration to intermittent and ephemeral streams/draws during treatment activities. No herbicide will be sprayed where the drift can enter standing water or saturated soil. It will be the herbicide applicators' responsibility to ensure that no herbicide or drift enters standing water, regardless of the season when the herbicide is applied. Similar considerations will be made when in proximity to agricultural fields.

# 6.0 Monitoring

A qualified investigator will be employed to annually assess noxious weed growth during the first five years of revegetation work and to make recommendations on noxious weed control measures. Reports will be submitted to the Certificate Holder, to ODOE, Oregon Department of Fish and Wildlife (ODFW), and Morrow County following each annual inspection. Annual noxious weed inspections will occur across the entire WREFI through visual inspection of revegetated areas while driving and/or walking. These inspections will be used to inform ongoing noxious weed control efforts. Noxious weed monitoring sites to be included in the annual reports will correspond with the reference sites identified for revegetation monitoring success, described below. Note that revegetation monitoring and reporting frequency differs from the noxious weed monitoring and reporting discussed in this Plan.

As described in the revegetation plan (Tetra Tech 2020), a qualified investigator (botanist or revegetation specialist) will inspect each revegetation area to assess the success of revegetation measures.

In consultation with ODFW, revegetation reference sites—habitat areas of similar quality to those found prior to disturbance at the areas to be revegetated—will be established to represent target conditions for revegetation areas. During each assessment, revegetated areas will be compared to reference sites with regard to:

- Presence and density of noxious weeds
- Degree of erosion
- Vegetative density
- Proportion of desirable vegetation

- Species diversity and structural stage of desirable vegetation

The goal is to control noxious weeds, such that the density is equal to or less than the density of noxious weeds in reference sites. Based on the success of noxious weed control efforts after the fifth year of annual monitoring, the Certificate Holder will consult with ODOE and ODFW to design a long-term weed control plan. The Certificate Holder may propose remedial actions and/or additional monitoring for noxious weed areas that have not met the success criteria.

The Certificate Holder will maintain ongoing communication with individual landowners, the Morrow County Weed Control Supervisor, and ODOE regarding noxious weeds within WREFI. Landowners may also contact the Certificate Holder directly to report the presence of noxious weeds related to Project activity. The Certificate Holder will control the noxious weeds on a case-by-case basis and prepare a summary of measures taken for that landowner. During operations of WREFI, the Certificate Holder will control noxious weeds as described in Section 5.3 in all revegetation areas.

The following contact information for the Morrow County Weed Control Supervisor will be used and updated as needed:

Dave Pranger, Weed Control Supervisor

Morrow County Public Works

365 West Highway 74

Lexington, OR 97839

(541) 989.9500

mcweed@co.morrow.or.us

# 7.0 References

DiTomaso, J.M., G.B. Kyser, S. R. Oneto, R. G. Wilson, S.B. Orloff, L.W. Anderson, S.D. Wright, J.A. Roncoroni, T.L. Miller, T. S. Prather, C. Ransom, K.G. Beck, C. Duncan, K.A. Wilson, and J. J. Mann. 2013. Weed Control in Natural Areas in the Western United States. Weed Research and Information Center, University of California. 544 pp.

EFSC (Energy Facility Siting Council). 2017a. Site Certificate for the Wheatridge Wind Energy Facility. Issued April 28, 2017.

EFSC. 2017b. First Amended Site Certificate for the Wheatridge Wind Energy Facility. Issued July 27, 2017.

EFSC. 2018a. Second Amended Site Certificate for the Wheatridge Wind Energy Facility. Issued, November 16, 2018.

EFSC. 2018b. Third Amended Site Certificate for the Wheatridge Wind Energy Facility. Issued December 14, 2018.

EFSC. 2019. Fourth Amended Site Certificate for the Wheatridge Wind Energy Facility. Issued November 22, 2019.

Kyser, G.B., J.M. DiTomaso, K.W. Davies, J.S. Davy, and B.S. Smith. 2014. Medusahead Management Guide for the Western States. University of California, Davis, Weed Research and Information Center.

Morrow County. 2019. Morrow Country Code Enforcement Ordinance. May 2019. Available online at: https://www.co.morrow.or.us/sites/default/files/fileattachments/planning/page/11881/2019_code_enforcement_final_.pdf. Accessed July 2019.

ODA (Oregon Department of Agriculture). 2019. Noxious Weed Policy and Classification System. Noxious Weed Control Program. Salem, OR. Available at: http://www.oregon.gov/ODA/shared/Documents/Publications/Weeds/NoxiousWeedPolicyClassification.pdf. Accessed July 2019.

Prather, T., T. Miller, A. Hulting, and E. Peachey. 2019. Control of Problem Weeds. In: Peachey, E. editor. Pacific Northwest Weed Management Handbook. Oregon State University. Corvallis, OR. P. Y-1 to Y-58.

Tetra Tech (Tetra Tech, Inc.). 2019. Wheatridge Wind Energy Facility 2019 Rare Plant Survey Report. September. Prepared for Wheatridge Wind Energy, LLC.

Tetra Tech. 2020. Wheatridge Renewable Energy Facility I Revegetation Plan. Prepared for Wheatridge Wind Energy, LLC.

# Figures

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# Location of Noxious Weeds Figure 1

## Wheatridge Renewable Energy Facility I

MORROW COUNTY, OR

Figure 1.1

Figure 1.2

207

578

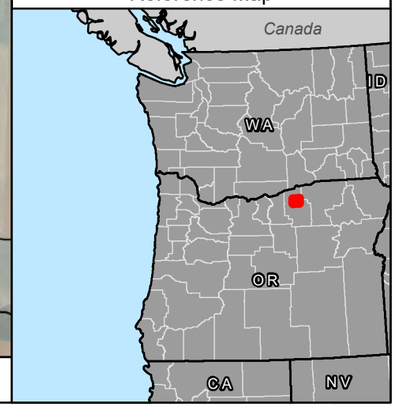
Noxious Weed Species
- Cereal Rye
- Diffuse Knapweed
- Jointed Goatgrass
- Kochia
- Rush Skeletonweed
- Scotch Thistle
- Spotted Knapweed
- Yellow Starthistle

Wheatridge Renewable Energy Facility I Site Boundary
Grid Index
State Highway
Local Road
County Boundary

TETRA TECH

NEXTera ENERGY RESOURCES

Reference Map




1:50,000 WGS 1984 UTM Zone 11N

0 0.5 1 2 3 4 Miles

NOT FOR CONSTRUCTION

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Alpine Ln

Canyon Rd

Grieb-Wood Rd

Juniper Rd

Doherty Rd

Barak Martin Rd N

Little Juniper Ln

Juniper Canyon Rd

**Location of Noxious Weeds Figure 1.1**

# Wheatridge Renewable Energy Facility I

**MORROW COUNTY, OR**

Wheatridge Renewable Energy Facility I Site Boundary

Local Road

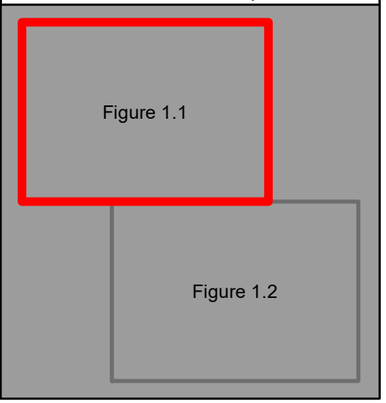
Noxious Weed Species

- Diffuse Knapweed
- Rush Skeletonweed
- Scotch Thistle

TETRA TECH

NEXTera ENERGY RESOURCES

Reference Map




**1:24,000** **WGS 1984 UTM Zone 11N**

0 0.25 0.5 1 1.5 2 Miles

NOT FOR CONSTRUCTION

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Location of
Noxious Weeds
Figure 1.2

# Wheatridge Renewable Energy Facility I

MORROW COUNTY, OR

Wheatridge Renewable Energy Facility I Site Boundary
State Highway
Local Road

Noxious Weed Species
- Cereal Rye
- Diffuse Knapweed
- Jointed Goatgrass
- Kochia
- Rush Skeletonweed
- Scotch Thistle
- Spotted Knapweed
- Yellow Starthistle

TETRA TECH

NEXTera ENERGY RESOURCES

Reference Map

Figure 1.1

Figure 1.2

Barak Martin Rd N
Strawberry Rd
207
Sand Hollow Rd
Kemp Ln
Clark-Rice-Beach Rd
Kilkenny Rd

1:24,000 WGS 1984 UTM Zone 11N

0 0.25 0.5 1 1.5 2 Miles

NOT FOR CONSTRUCTION

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# Noxious Weed Control Plan for the Wheatridge Renewable Energy Facility II

**Prepared for**
**Wheatridge Wind II, LLC**

**Prepared by**

TETRA TECH

**April 2020**
Effective Date: Wheatridge Renewable Energy Facility II Site Certificate Effective Date

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# 1.0 Introduction

This Noxious Weed Plan (Plan) has been prepared for the Wheatridge Renewable Energy Facility II (WREFII) West, a 200-megawatt wind energy facility in Morrow County. Wheatridge Wind II, LLC (Certificate Holder) holds the site certificate for the WREFII. WREFII has areas of overlapping Site Boundary and shared related and supporting facilities with Wheatridge Renewable Energy Facility I (WREFI; Wheatridge Wind Energy, LLC is the certificate holder).

The two facilities were originally permitted as one facility, the Wheatridge Wind Energy Facility (WWEF). WWEF was granted approval of a site certificate by the Oregon Department of Energy's (ODOE) Energy Facility Siting Council (EFSC) on April 28, 2017 (EFSC 2017a) consisting of facilities in north Morrow (Wheatridge West) and Umatilla (Wheatridge East) counties[1]. Wheatridge West began construction in January 2020.

Prior to operation, but after construction had commenced, WWEF was split into WREFI and WREFII. WREFI is a 100-MW wind energy facility within the Wheatridge West portion of the WWEF. WREF II is a 400-MW wind energy and 150-MW solar energy and battery storage facility within Wheatridge West and Wheatridge East. Of the 400 MW of wind energy in WREFII, 200 MW is located within Wheatridge West and is referred to as WREFII West This Plan has been prepared for WREFII West, but reflects the plan prepared for Wheatridge West as part of pre-construction compliance in coordination with, and approved by, ODOE and Morrow County. The Certificate Holder will amend this Plan or prepare separate noxious weed plans for the remaining portions of WREFII prior to construction of those facilities.

Noxious weed species can adversely affect the structure, composition, and success of revegetation efforts associated with construction-related temporary disturbances. The intent of this Plan is to provide clear methods to prevent the introduction and spread of designated noxious weeds from the construction and operation of WREFII, to control existing populations of noxious weeds within construction areas, and to monitor efforts to prevent and control noxious weeds. The Certificate Holder and its contractors will be responsible for implementing the methods detailed in this Plan.

# 2.0 Pre-Construction Compliance

## 2.1 Site Certificate Conditions

The Noxious Weed Control Plan addresses the following pre-construction condition of the Fourth Amended Site Certificate for WWEF (EFSC 2019):

> ***PRE-LU-03*** *Before beginning construction, the certificate holder shall prepare a Weed Control Plan that is consistent with Morrow and Umatilla County weed control*

[1] The site certificate for the WWEF was amended five times, including the addition of solar energy generation and battery storage components and splitting the facility into WREFI and WREFII (EFSC 2017b, EFSC 2018a, EFSC 2018b, EFSC 2019).

*requirements to be approved by the department. The department shall consult with Morrow and Umatilla counties and ODFW. The final plan must be submitted to the department no less than 30 days prior to the beginning of construction. The certificate holder shall implement the requirements of the approved plan during all phases of construction and operation of the facility.*

## 2.2 Regulatory Framework

### *2.2.1 State of Oregon*

In Oregon, noxious weeds are defined under Oregon Revised Statutes (ORS) 569.175 as "terrestrial, aquatic, or marine plants designated by the Oregon State Weed Board (OSWB) under ORS 569.615 as among those representing the greatest public menace and as a top priority for action by weed control programs." Noxious weeds have been declared by ORS 569.350 as a menace to public welfare, and control of these plants is the responsibility of private landowners and operators, as well as county, state, and federal governments.

The OSWB was established under ORS 561.650. It provides direction to control noxious weeds at the state level and develops and maintains the State Noxious Weed List. OSWB and the Oregon Department of Agriculture (ODA) classify noxious weeds in Oregon in accordance with the ODA Noxious Weed Classification System (ODA 2019). There are three designations under the State's system:

- **Class A State Listed Noxious Weed:** A weed of known economic importance which occurs in the state in small enough infestations to make eradication or /containment possible; or is not known to occur in Oregon, but its presence in neighboring states makes future occurrence seem imminent.
    - **Recommended Action:** Infestations are subject to eradication or intensive control when and where found.
- **Class B State Listed Noxious Weed:** A weed of economic importance that is regionally abundant but may have limited distribution in some counties.
    - **Recommended Action:** Limited to intensive control at the state, county, or regional level as determined on a site-specific, case-by-case basis. Where implementation of a fully integrated statewide management plan is not feasible, biological control (when available) shall be the primary control method.
- **Class T Designated State Noxious Weeds:** Priority noxious weed species selected and designated by the OSWB as the focus of prevention and control actions by the Noxious Weed Control Program. T-designated noxious weeds are selected annually from either the A or B list and the ODA is directed to develop and implement a statewide management plan for these species.

### *2.2.2 Morrow County*

The Morrow County Code Enforcement Ordinance establishes procedures for enforcing Morrow County Code through the authority granted to general law counties by ORS Chapter 203. Section 11 of the county ordinance establishes Morrow County as a weed control district, defines what is considered a noxious weed or weed of economic importance, identifies the responsibility of private land owners to control weeds, and outlines the authority of the weed control district and Morrow County Weed Coordinator to enforce the ordinance.

Morrow County has its own weed classification system that differs from the state. Morrow County defines two classifications of weeds:

- **Morrow County A List:** Noxious weeds. Any plant that is determined by the County Weed Advisory Board, and so declared by the County Board of Commissioners to be injurious to public health, crops, livestock, land, or property under provisions of Oregon State Statute and thus mandated for control.
- **Morrow County B List:** Weeds of economic importance. Weeds of limited distribution in the county and subject to intensive control or eradication where feasible.

# 3.0 ODA and Morrow County Weeds Lists

The ODA lists 46 Class A species and 92 Class B species for the state (ODA 2019). Morrow County specifically recognizes 37 species of noxious weeds (Table 1; Morrow County 2019). Although, not all of the Morrow County listed noxious weeds noted in Table 1 occur within or near WREFII, the Certificate Holder and its contractors should be aware of the entire list while monitoring and controlling weeds. Noxious weeds known to occur within or near WREFII are discussed in Section 4.0.

**Table 1. Morrow County Weed Department Weed Lists and Classifications**

| Scientific Name | Common Name | Morrow County Classification |
|---|---|---|
| *Butomus umbellatus* | flowering rush | A |
| *Cardaria* (*Lepidium*) *draba* | whitetop (hoary cress) | A |
| *Carduus acanthoides* | plumeless thistle | A |
| *Carduus nutans* | musk thistle | A |
| *Centaurea solstitialis* | yellow starthistle | A |
| *Centromadia* (*Hemizonia*) *pungens* subsp. *pungens* | spikeweed | A |
| *Chondrilla juncea* | rush skeletonweed | A |
| *Crupina vulgaris* | common crupina | A |
| *Cynoglossum officinale* | houndstongue | A |
| *Euphorbia esula* | leafy spurge | A |

| Scientific Name | Common Name | Morrow County Classification |
|---|---|---|
| *Iris pseudacorus* | yellow flag iris | A |
| *Linaria dalmatica* | dalmatian toadflax | A |
| *Linaria vulgaris* | yellow toadflax | A |
| *Lythrum salicaria* | purple loosestrife | A |
| *Onopordum acanthium* | scotch thistle | A |
| *Salvia aethiopis* | Mediterranean sage | A |
| *Senecio jacobaea* | tansy ragwort | A |
| *Acroptilon repens* | Russian knapweed | B |
| *Aegilops cylindrica* | jointed goatgrass | B |
| *Avena fatua* | wild oats | B |
| *Bassia* (*Kochia*) *scoparia* | kochia | B |
| *Centaurea diffusa* | diffuse knapweed | B |
| *Centaurea stoebe* subsp. *micranthos* | spotted knapweed | B |
| *Cicuta douglasii* | water hemlock | B |
| *Cirsium arvense* | Canada thistle | B |
| *Conium maculatum* | poison hemlock | B |
| *Convolvulus arvensis* | field bindweed | B |
| *Cuscuta* spp. | field dodder | B |
| *Euphorbia myrsinites* | myrtle spurge | B |
| *Hypericum perforatum* | St. Johnswort | B |
| *Lepidium latifolium* | perennial pepperweed | B |
| *Secale cereale* | cereal rye | B |
| *Sonchus arvensis* | perennial sowthistle | B |
| *Sorghum halepense* | johnsongrass | B |
| *Taeniatherum caput-medusae* | medusahead rye | B |
| *Tribulus terrestris* | puncturevine | B |
| *Ventenata dubia* | ventenata | B |

# 4.0 Noxious Weeds Identified at WREFII

Field surveys for the state-listed threatened plant species Laurent's milkvetch (*Astragalus collinus* var. *laurentii*) were conducted for the WWEF from June 29 – July 2 and July 17 – 18, 2019 (Tetra Tech 2019). Noxious weeds were also recorded during these surveys, as well as during other pre-construction biological surveys.

Table 2 identifies both state and county listed noxious weed species observed during pre-construction surveys, and their estimated frequency of occurrence. The location of these noxious weeds is shown in Figure 1.

**Table 2. Noxious Weeds Identified at WREFII**

| Scientific Name | Common Name | State Status (ODA)[1] | Morrow County Status [2] | Frequency |
|---|---|---|---|---|
| *Aegilops cylindrica* | jointed goatgrass | B | B | Abundant in southern portion of WREFII |
| *Bassia (Kochia*) *scoparia* | kochia | B | B | Infrequent; but where found typically occurs in dense populations |
| *Centaurea diffusa* | diffuse knapweed | B | B | Common |
| *Centaurea solstitialis* | yellow starthistle | B | A | Abundant in northern portion of WREFII |
| *Centaurea stoebe* ssp. *micranthos* | spotted knapweed | B/T | B | Infrequently observed in central and northern portion of WREFII |
| *Chondrilla juncea* | rush skeletonweed | B/T | A | Infrequent |
| *Cirsium arvense* | Canada thistle | B | B | Infrequent; one observation in southern portion of WREFII |
| *Convolvulus arvensis* | field bindweed | B | B | Common in central and southern portion of WREFII |
| *Onopordium acanthium* | Scotch thistle | B | A | Infrequent; one observation in northern portion of WREFII |
| *Secale cereale* | cereal rye | N/A | B | Infrequently observed in northern portion of WREFII; but where found typically occurs in dense populations |
| *Taeniatherum caput-medusae* | medusahead rye | B | B | Infrequently observed in southern portion of WREFII; but where found typically occurs in dense populations |
| *Ventenata dubia* | ventenata | B | B | Infrequently found in southern portion of WREFII; but where found typically occurs in dense populations |

Sources: ODA 2019. Morrow County 2019.

1. ODA: A = A weed of known economic importance which occurs in the state in small enough infestations to make eradication or containment possible; or is not known to occur, but its presence in neighboring states make future occurrence in Oregon seem imminent. B = A weed of economic importance which is regionally abundant, but which may have limited distribution in some counties. T = priority targets for control.

2. Morrow County: A = Noxious Weeds. B = Weeds of Economic Importance.

# 5.0 Weed Management

This section of the Plan describes the steps the Certificate Holder will take to prevent and control the establishment and spread of noxious weed species during both construction and operation of WREFII. Noxious weed control methods for WREFII described in this Plan have been developed utilizing information from the ODA Noxious Weed Control Program and the Morrow County Weed Control Program.

The management of noxious weeds will be considered throughout all stages of construction and operation of WREFII and will include:

- **Education and Personnel Requirements:** Educating all construction personnel regarding known locations of noxious weed infestations, identification of noxious weed species, and the importance of preventive measures and treatment methods.
- **Prevention:** Implementing measures to prevent the spread of noxious weeds during construction, operation, and maintenance activities.
- **Treatment:** Treating noxious weed infestations with appropriate control methods within the most effective timeframe.

The Certificate Holder's objective is to prevent the introduction of new weed populations and the spread of existing noxious weed populations. The methods described below will be implemented to minimize the spread of noxious weeds during construction activities. New noxious weeds detected during post-construction revegetation will be considered a result of construction activities and will be controlled accordingly.

## 5.1 Education and Personnel Requirements

Prior to construction, all construction personnel will be instructed on the importance of controlling noxious weeds. As part of start-up activities, and to help facilitate the avoidance of existing infestations and identification of new infestations, the Certificate Holder or their construction contractor will provide information and training to all construction personnel regarding noxious weed identification and management. Operations and maintenance personnel will be similarly informed. The importance of preventing the spread of noxious weeds in areas not currently infested and controlling the proliferation of noxious weeds already present within or near the Facility, will be emphasized.

## 5.2 Prevention

Implementation of the following best management practices are intended to prevent the spread of noxious weeds during construction activities, revegetation efforts, and operation and maintenance activities.

- Prior to construction, areas of noxious weed infestations will be flagged to alert construction personnel to their presence;

- Limiting vehicle access to designated routes, whether existing roads or newly constructed roads, and the outer limits of construction disturbances per the final design for the Facility;
- Limiting vehicle traffic in noxious weed-infested areas;
- Cleaning construction vehicles prior to entering the Facility for the first time and upon completion of work at the Facility at a wash station located within the laydown yard off Baseline Road near turbine 62, or at a public car wash in the vicinity of the Facility;
- Cleaning vehicles and equipment associated with ground disturbance and movement of topsoil utilizing a mobile wash station after performing work in noxious weed-infested areas and prior to performing work in non-infested areas;
- Topsoil and other soils from noxious weed infested areas will not be moved outside of the infested areas and will be returned to its previous location during reclamation activities;
- Soils from infested areas may be treated with a pre-emergent herbicide prior to initiation of revegetation efforts, depending on site-specific conditions;
- Movement of topsoil and other soils from non-infested areas will be limited to eliminate the transport of weed seeds, roots, or rhizomes.
- Providing information regarding target noxious weed species at the O&M buildings;
- Treating noxious weeds via mechanical or chemical control (see Section 5.3);
- Preventing conditions favorable for noxious weed germination and spread by revegetating temporarily disturbed areas as soon as possible;
- Monitoring areas of disturbance for noxious weeds after construction (see Section 6.0), during the normal course of revegetation maintenance of temporary work spaces, and implementing control measures as appropriate;
- Revegetating the site with appropriate, local native seed or native plants; when these are not available, non-invasive and non-persistent non-native species may be used; and
- Inspecting and certifying that the seed and straw mulch used for site rehabilitation and revegetation are free of noxious weed seed and propagules.
- A mobile wash station will be placed in proximity to the main access points to occupied Laurent's milkvetch habitat in order to minimize the introduction of noxious weeds or other invasive plant species by construction vehicles. Vehicles will be washed prior to entering these areas.

## 5.3 Treatment

Control of noxious weeds will be implemented through mechanical or chemical control measures. The Certificate Holder will be responsible for hiring a qualified contractor to implement the treatment of noxious weeds. The Certificate Holder will ensure that noxious weed management actions will be carried out by specialists with the following qualifications:

- Experience in native plant, non-native and invasive plants, and noxious weed identification;
- Experience in noxious weed mapping;
- If chemical control is used, specialists must possess a Commercial or Public Pesticide Applicator License from the ODA or possess an Immediately Supervised Pesticide Trainee License and be supervised by a licensed applicator;
- Training in noxious weed management or Integrated Pest Management with an emphasis in noxious weeds; and
- Experience in coordination with agency and private landowners.

Existing noxious weed populations should be prevented from expanding in size and density and should not be spread to new sites. Where possible, existing populations of noxious weeds should be eradicated. If it is determined that noxious weeds have invaded areas immediately adjacent to WREFII (e.g., areas visible just beyond the outer limits of construction disturbances associated with WREFII or along access roads) as a result of construction, the Certificate Holder will contact the landowner and seek approval to treat those noxious weed populations.

Long-term weed control methods will be described in a long-term monitoring plan as described in Section 6.0. The main factor in long-term weed control is successful revegetation with non-weedy species as described in the updates to the revegetation plan (Tetra Tech 2020). As noted above, short-term noxious weed control will be done through mechanical or chemical treatment. However, it will be important to ensure that the short-term treatment does not affect the establishment of the native perennial cover that will help provide the long-term control. Additionally, early detection and control of small noxious weed populations before they can expand into larger populations is extremely important for successful weed control efforts.

Noxious weed control will continue until the disturbed areas meet the identified success criteria described in Section 6.0. Supplemental seeding of desirable species may be needed to achieve this goal. Fertilizer application will be limited in areas treated for noxious weeds, as fertilizer can stimulate the growth of noxious weeds, and the timing of revegetation activities will need to be coordinated with noxious weed treatments.

### *5.3.1 Mechanical Treatment*

Mechanical control methods rely on removal of plants, seed heads, and/or cutting roots with a shovel or other hand tools or equipment that can be used to remove, mow, or disc noxious weed populations. Hand removal of plants is also included under this treatment method. Mechanical methods are useful for smaller, isolated populations of noxious weeds in areas of sensitive habitats (such as around known populations of Laurent's milkvetch; Figure 1.3 and Figure 1.4). Some rhizomatous plants can spread by discing or tillage; therefore, implementation of discing will be species specific. If such a method is used in areas to be reclaimed, subsequent seeding will be conducted to re-establish desirable vegetative cover that will stabilize the soils and slow the potential re-invasion of noxious weeds. Discing or other mechanical treatments that disturb the soil

surface within native habitats will be avoided in favor of herbicide application (see Section 5.3.2), which is an effective means of reducing the size of noxious weed populations as well as preventing the establishment of new infestations.

### *5.3.2 Chemical Treatments*

Chemical control can effectively remove noxious weeds through use of selective herbicides. The recommended chemical treatment and timing of chemical application for noxious weeds that have been identified at WREFII (Table 2) are presented in Table 3. The herbicides used and the timing of application will differ depending on whether the species are (1) perennial, broad-leaved, or dicot weeds (e.g., thistles and knapweeds, field bindweed) or (2) annual grasses or monocots (e.g., medusahead rye), as appropriate herbicides differ substantially between dicots and monocots.

All herbicides included in Table 3 are currently approved for use by the U.S. Environmental Protection Agency (EPA) and ODA; however, the status of herbicide approval should be checked annually. Prior to construction and every fall season during facility operation, the Certificate Holder or its contractor shall consult with the Morrow County Weed Supervisor on timing, method and application rates for each identified weed species of concern, to allow for adaptive weed management given changes in weed control effectiveness from noxious weed species tolerance to herbicide treatment over time. Results of the consultation shall be reported in the Certificate Holder's annual weed monitoring report. Any alternative control methods can be proposed by the Certificate Holder or its contractors after consulting with the Morrow County Weed Supervisor, and included in the Certificate Holder's annual weed monitoring report.

**Table 3. Recommended Timing and Method of Control**

| Noxious Weed Species | Method and Timing of Control |
|---|---|
| *Aegilops cylindrica* (jointed goatgrass) | **Glyphosate** – Apply to actively growing plants emerged before bolt stage (i.e., stage of growth where growth is focused on seed development versus leaf development).<br>• Rate: 0.38 to 0.75 lb ae/a[1]<br>**Imazapic –** Apply pre-emergence in fall. Due to the residual effect of this herbicide, it will not be used in areas to be revegetated.<br>• Rate: 0.063 to 0.188 lb/a[1]<br>**Sulfometuron** – Apply in fall or in late winter before jointed goatgrass is 3 inches tall.<br>• Rate: 1 to 1.5 oz ai/a (1.33 to 2 oz/a)[1] |
| *Bassia (Kochia) scoparia* (Kochia) | **Aminocyclopyrachlor + chlorsulfuron** – Apply either pre-emergence (late winter/early spring) or post-emergence. Postemergence is most effective on seedlings.<br>• Rate: 4.75 to 8 oz/a[1]<br>**Chlorsulfuron –** Apply pre-emergence (late winter/early spring), or post-emergence from seedling to bolting stage of growth.<br>• Rate: 0.75 oz ai/a (1 oz/a)[1]<br>**Dicamba –** Apply in spring when seedlings are actively growing.<br>• Rate: 0.25 to 1 lb ae/a (0.5 to 2 pints/a)[1]<br>**Fluroxypyr** – Apply in spring from seedling to bolting stage of growth. |

| Noxious Weed Species | Method and Timing of Control |
|---|---|
| | • Rate: 2.1 to 7.7 oz ae/a (6 to 22 o/a)[1]<br>**Glyphosate** – Apply in spring from seedling to flowering stage of growth.<br>• Rate: 1.1 to 1.7 lb ae/a[1]<br>**Hexazinone –** Apply pre-emergence in the early spring.<br>• Rate: 0.5 to 1.5 lb ai/a (2 to 6 pints/a)[1]<br>**Imazapyr –** Apply pre-emergence (late winter/early spring) or post-emergence to actively growing kochia.<br>• Rate: 0.5 to 1.5 lb ae/a (2 to 4 pints/a)[1]<br>**Metsulfuron –** Apply in spring from seedling to flowering stage of growth.<br>• Rate: 0.6 to 1.2 oz ai/a (1 to 2 oz/a)[1]<br>**Rimsulfuron –** Apply pre-emergence (late winter/early spring) or post-emergence to kochia seedlings.<br>• Rate: 1 oz ai/a (4 oz/a)[1] |
| *Centaurea diffusa* (diffuse knapweed)<br><br>*Centaurea stoebe* ssp. *micranthos* (spotted knapweed) | **2,4-D –** Apply at the early stage of flower stem elongation (late April to early May).<br>• Rate: 1 to 2 lb ae/a[1]<br>**Aminocyclopyrachlor + chlorsulfuron** – Apply to actively growing plants in spring.<br>• Rate: 1.8 to 3.2 oz/a aminocyclopyrachlor + 0.7 to1.3 oz/a chlorsulfuron (4.5 to 8 oz/a of product)[1]<br>**Aminopyralid** – Consult label for optimum timing. Diffuse and spotted knapweed: apply to actively growing plants in fall or in spring from rosette to bolting growth stages.<br>• Rate: 1 to 1.75 oz ae/a[1]<br>**Clopyralid –** Up to the bud stage of knapweeds.<br>• Rate: 0.25 to 0.5 lb ae/a (0.66 to 1.33 pints/a)[1]<br>**Clopyralid + 2,4-D amine (Curtail) –** Apply after most rosettes emerge but before flower stem elongates.<br>• Rate: 2 to 4 quarts/a Curtail[1]<br>**Diflufenzopyr + dicamba –** Apply to rosettes.<br>• Rate: 0.26 to 0.35 lb ae/a[1]<br>**Glyphosate –** Apply to actively growing knapweed when most plants are at bud stage.<br>• Rate: 3 lb ae/a[1]<br>**Picloram –** Apply in late spring before or during flower stem elongation.<br>• Rate: 0.25 to 0.5 lb ae/a[1]<br>**Triclopyr + clopyralid –** Apply from rosette to early bolt stage when weeds are actively growing.<br>• Rate: 1.5 to 2 pints/a[1] |
| *Centaurea solstitialis* (yellow starthistle) | **2,4-D LV ester or 2,4-D amine –** Apply before flowering.<br>• Rate: 1 lb ae/a[1] in 50 gallons of water<br>**Aminocyclopyrachlor + chlorsulfuron –** Apply to actively growing plants.<br>• Rate: 1.2 to 1.8 oz/a[1] aminocyclopyrachlor + 0.5 to 0.7 oz/a chlorsulfuron (3 to 4.5 oz/a of product)<br>**Aminopyralid (Milestone) –** Apply to plants at the rosette through bolting stages. |

| Noxious Weed Species | Method and Timing of Control |
|---|---|
| | • Rate: 0.75 to 1.25 oz ae/a (3 to 5 fluid oz/a Milestone)[1]<br>**Chlorsulfuron –** For best results apply to young, actively growing plants.<br>• Rate: 1.125 oz ai/a (1.5 oz/a)[1]<br>**Clopyralid –** After most rosettes have emerged but before bud formation.<br>• Rate: 0.09 to 0.375 lb ae/a (0.25 to 1 pint/a)[1]<br>**Clopyralid + 2,4-D amine (Curtail) –** Apply after most rosettes have emerged but before bud formation.<br>• Rate: 1 to 5 quarts/a Curtail[1]<br>**Dicamba –** Apply when plants are still in rosettes but before flower stems elongate.<br>• Rate: 1 to 2 lb ae/a[1]<br>**Diflufenzopyr + dicamba –** Apply to seedlings or rosettes.<br>• Rate: 0.26 to 0.35 lb ae/a (6 to 8 oz/a)[1]<br>**Picloram –** In spring, to plants still in rosette through bud formation.<br>• Rate: 0.25 to 0.375 lb ae/a[1]<br>**Triclopyr + clopyralid –** Apply from rosette to early bolt stage when starthistle is actively growing.<br>• Rate: 1.5 to 2.5 pints/a[1] |
| *Chondrilla juncea* (rush skeletonweed) | **2,4-D or MCPA –** Apply to rosettes in the spring immediately before or during bolting.<br>• Rate: 2 lb ae/a[1]<br>**Aminocyclopyrachlor + chlorsulfuron –** Apply to actively growing plants in spring.<br>Rate: 1.8 to 3.2 oz/a[1] aminocyclopyrachlor + 0.7 to 1.3 oz/a chlorsulfuron (4.5 to 8 oz/a of product)<br>**Aminopyralid (Milestone) –** Spring or fall when rosettes are present.<br>• Rate: 1.75 oz ae/a (7 fluid oz/a Milestone)[1]<br>**Clopyralid –** Apply to rosettes in fall or up to early bolting in spring.<br>• Rate: 0.25 to 0.375 lb ae/a (0.66 to 1 pint/a)[1]<br>**Picloram –** Apply from late fall to early spring. For best results, apply just before or during bolting.<br>• Rate: 1 lb ae/a[1] |
| *Cirsium arvense* (Canada thistle) | **Aminocyclopyrachlor + chlorsulfuron –** Apply to actively growing plants in spring.<br>• Rate: 1.8 to 3.2 oz/a[1] aminocyclopyrachlor + 0.7 to 1.3 oz/a chlorsulfuron (4.5 to 8 oz/a of product)<br>**Aminopyralid (Milestone) –** Apply in the spring to plants in the pre-bud stage of growth or in the fall to plant regrowth.<br>• Rate: 1.25 to 1.75 oz ae/a (5 to 7 fluid oz/a Milestone)[1]<br>**Chlorsulfuron –** Apply post-emergence. For best results, apply to plants in the bud-bloom stage or to fall rosettes.<br>• Rate: 1.125 oz ai/a (1.5 oz/a)[1]<br>**Clopyralid + 2,4-D amine (Curtail) or clopyralid (Stinger or Transline) –** Apply to actively growing thistle after most basal leaves emerge but before bud stage.<br>• Rate: Consult labels. Rate depends on use site.<br>**Dicamba –** May be applied any time during the growing season. |

| Noxious Weed Species | Method and Timing of Control |
|---|---|
| | • Rate: 2 lb ae/a. Spot treatment: use mixtures of 2 to 4 lb ae dicamba per 100 gallons of water[1]<br>**Diflufenzopyr + dicamba –** Apply in spring to the rosettes.<br>• Rate: 0.26 to 0.35 lb ae/a (6 to 8 oz/a)[1]<br>**Glyphosate –** Apply when plants are actively growing but past the bud growth stage. Fall applications must be before the first killing frost.<br>• Rate: Broadcast: 1.5 to 2.25 lb ae/a[1]; Wiper: 10 to 33% solution; Hand-held and high-volume equipment: 2% solution.<br>• Thistles that were mowed or tilled and have rosettes at least 6 inches wide in late summer or fall can be suppressed with 0.75 lbs. ae/a glyphosate plus 0.5 to 1% nonionic surfactant applied in 3 to 10 gal/a water.<br>**Picloram –** Control is best if applied to actively growing thistle after most leaves emerge but before bud stage.<br>• Rate: In broadcast or boom sprayers, apply 1 lb ae/a. Mixtures normally used for spot treatments include 1 lb ae per 100 gallons of water[1]<br>**Triclopyr + clopyralid –** Apply from rosette to bud stage to actively growing thistle.<br>• Rate: 2.5 to 4 pints/a[1] |
| *Convolvulus arvensis* (field bindweed) | **2,4-D (for suppression) amine –** Apply at bud growth stage or at summer fallow in early August.<br>• Rate: 2 to 3 lb ae/a[1]<br>**Aminocyclopyrachlor + chlorsulfuron –** Apply to broadleaf weeds in spring.<br>• Rate: 1.8 to 3.2 oz/a[1] aminocyclopyrachlor + 0.7 to 1.3 oz/a chlorsulfuron (4.5 to 8 oz/a of product)[1]<br>**Dicamba or dicamba + 2,4-D (for suppression) –** Apply during fallow, before planting and when plants are actively growing.<br>• Rate: 0.5 to 1 lb ae/a dicamba; or 0.5 to 1 lb ae/a dicamba + 1 to 2 lb ae/a 2,4-D[1]<br>**Dicamba or dicamba + 2,4-D (for control) –** Apply in late summer or fall before killing frost.<br>• Rate: 1 to 2 lb ae/a dicamba; or 1 to 2 lb ae/a dicamba + 1 to 2 lb ae/a 2,4-D[1]<br>**Glyphosate –** Apply at full bloom to early seed stage of maturity. Application on fall regrowth may provide some control.<br>• Rate: 3 to 3.75 lb ae/a[1]<br>**Glyphosate + 2,4-D (Landmaster BW)–** Apply to bindweed runners that are at least 10 inches long. Use 1% solution to spot treat with high-volume, spray-to-wet applications. Tilling after treatment may improve control.<br>• Rate: 0.378 to 0.67 lb ae/a (54 oz/a Landmaster)[1]<br>**Glyphosate + dicamba –** Apply mid- to late-bloom but before seed matures. Applying to fall regrowth may give some control.<br>• Rate: 1.5 lb ae/a glyphosate + 0.5 lb ae/a dicamba[1]<br>**Imazapic –** Apply after 25% bloom through fall to actively growing bindweed.<br>• Rate: 0.125 to 0.188 lb ai/a[1]<br>**Metsulfuron –** Apply to actively growing bindweed in bloom stage. |

| Noxious Weed Species | Method and Timing of Control |
|---|---|
| | • Rate: 0.6 to 1.2 oz ai/a (1 to 2 oz/a)[1]<br>**Picloram –** Apply in the growing season on non-cropland when bindweed is visible. Timing is not critical, but results are most consistent if bindweed is in early bud to full bloom.<br>• Rate: 1 lb ae/a[1]<br>**Quinclorac –** Apply in fall before frost to actively growing bindweed with stems at least 4 inches long.<br>• Rate: 6 oz ai/a (8 oz/a)[1] |
| *Onopordum acanthium* (Scotch thistle) | **2,4-D –** spring or fall.<br>• Rate: 1.5 to 2 lb ae/a[1]<br>**Aminocyclopyrachlor + chlorsulfuron (Perspective) –** Apply to actively growing plants in spring.<br>• Rate: 1.8 to 3.2 oz/a aminocyclopyrachlor + 0.7 to 1.3 oz/a chlorsulfuron (4.5 to 8 oz/a of product)[1]<br>**Aminopyralid (Milestone)** – Apply in spring or early summer to rosettes or bolting plants or in fall to seedlings and rosettes.<br>• Rate: 0.75 to 1.25 oz ae/a (3 to 5 fl oz/a Milestone)[1]<br>**Chlorsulfuron –** Apply to young, actively growing plants.<br>• Rate: 0.75 oz ai/a (1 oz/a)[1]<br>**Clopyralid + 2,4-D amine (Curtail) –** Apply to actively growing thistle after most basal leaves emerge but before bud stage.<br>• Rate: 1 to 5 quarts/a Curtail[1]<br>**Clopyralid –** Apply up to the bud stage.<br>• Rate: 0.09 to 0.375 lb ae/a (0.25 to 1 pint/a)[1]<br>**Dicamba –** Apply before flower stalk lengthens on established plants and for seedling control. Spray fall applications to control rosettes.<br>• Rate: 0.5 to 1 lb ae/a[1]<br>**Diflufenzopyr + dicamba –** Apply to the rosettes.<br>• Rate: 0.175 to 0.35 lb ae/a (4 to 8 oz/a)[1]<br>**Glyphosate + 2,4-D –** Apply to plants in rosette stage of growth in spring or before freeze-up in fall.<br>• Rate: Broadcast: 16 to 32 fl oz/a[1]. Spot treatment: 1 to 2% solution.<br>**Metsulfuron (Escort and others) –** Apply post-emergence to actively growing plants.<br>• Rate: Escort: 0.6 oz ai/a (1 oz/a)[1]<br>**Picloram –** Apply in the fall before plants bolt.<br>• Rate: 0.25 lb ae/a[1]<br>**Triclopyr + clopyralid –** Apply to actively growing plants from rosette to early bolt stage.<br>• Rate: 1.5 to 2 pints/a[1] |
| *Secale cereale* (cereal rye) | Consult with Morrow County Weed Supervisor.<br>Glyphosate can be applied post-emergence; does not provide residual weed control. |
| *Taeniatherum caput-medusae* (medusahead rye) | Consult with Morrow County Weed Supervisor. |

| Noxious Weed Species | Method and Timing of Control |
|---|---|
| | **Glyphosate –** For selective control in shrubland, apply post-emergence in spring after all seedlings are up and before heading; the tillering stage is ideal. For late-season, non-selective control, apply to rapidly growing plants before seeds are produced.<br>• Rate: 0.75 to 1pint product (41% glyphosate)/a (4.5 to 6 oz ae/a) for early-season selective control in shrubland or other perennial systems; 1 to 2 quarts product/a (0.75 to 1.5 lb ae/a)[1] for late-season, non-selective control.<br>• **Imazapic –** Fall or spring. In warm-winter areas, fall applications may be most effective. In colder climates, spring applications after snow melt is better.Rate: 4 to 12 fluid oz product/a (1 to 3 oz ae/a)[1]<br>**Rimsulfuron –** Pre-emergence (fall) to early post-emergence (early spring)<br>• Rate: 4 oz product/a (1 oz active ingredient (ai)/a)[1]<br>**Sulfometuron –** Pre-emergence to early post-emergence. Pre-emergence (fall) applications are generally more effective.<br>• Rate: 0.75 to 1.5 oz product/a (0.56 to 1.13 oz ai/a)[1]<br>**Sulfometuron + chlorsulfuron –** Pre-emergence in fall or after soil thaws in spring.<br>• Rate: 1.5 to 2.25 oz product/a[1] |
| *Ventenata dubia* (ventenata) | **Imazapic (Plateau, Panoramic) –** Apply in the fall after ventenata has emerged.<br>• Rate: 5 oz /a Plateau or Panoramic[1]<br>**Sulfosulfuron (Outrider) –** Apply in the fall after ventenata has emerged (1 inch rain and soil temperature above 45°F).<br>• Rate: 0.75 oz/a Outrider[1]<br>**Flufenacet + metribuzin (Axiom DF) –** Apply before plants emerge (late summer/early fall), or no later than the two-leaf stage.<br>• Rate: 0.27 to 0.31 lb ai/a flufenacet + 0.068 to 0.084 lb ai/a metribuzin (8 to 10 oz/a Axiom)[1]<br>**Indaziflam –** Apply pre-emergence (late summer/early fall).<br>• Rate: 3.5 to 7 oz/a[1]<br>**Rimsulfuron –** Apply before or soon after seedlings emerge (late summer to fall).<br>• Rate: 2 to 4 oz/a[1] |
| Sources: DiTomaso e al. 2013; Kyser et al. 2014,Prather et al. 2019.<br>[1] a = acre; ae = acid equivalent; ai = active ingredient; lb= pound; oz = ounces | |

The application of herbicides will be to identified, treatable, noxious weed infestations. The Certificate Holder or their contractors will coordinate with the Morrow County Weed Control Supervisor to determine which populations are treatable, and will notify landowners of proposed herbicide use on their lands prior to application. If a noxious weed population is deemed to be untreatable (e.g., too widespread and established in an area to successfully control), the Certificate Holder will implement the prevention measures discussed in Section 5.2, except for treatment with herbicides.

### *5.3.2.1 Herbicide Application and Handling*

Herbicide application will adhere to EPA and ODA standards. Only those herbicides that are approved by the EPA and ODA will be used. In general, application of herbicides will not occur when the following conditions exists:

- Wind velocity exceeds 15 miles per hour for granular application, or exceeds 10 miles per hour for liquid applications;
- Snow or ice covers the foliage of target species; or
- Adverse weather conditions are forecasted within the next few days.

Hand application methods (e.g., backpack spraying) may be used in roadless areas or in rough terrain. Vehicle-mounted sprayers (e.g., handgun, boom and injector) will be used mainly in open areas that are readily accessible by vehicle. Calibration checks of equipment will be conducted prior to spraying activities, as well as periodically throughout use, to ensure that appropriate application rates are achieved.

Herbicides will be transported to WREFII daily with the following stipulations:

- Only the quantity needed for that day's work will be transported.
- Concentrate will be transported in approved containers only, and in a manner that will prevent spilling, stored separately from food, clothing, and safety equipment.
- Mixing will be done off site and at a distance greater than 200 feet from open or flowing water, wetlands, or other sensitive species' habitat. No herbicides will be applied at these areas unless authorized by the appropriate regulatory agencies.
- All herbicide equipment and containers will be inspected daily for leaks.
- Herbicides use will be in accordance with all manufacture's label recommendations and warnings.

### *5.3.2.2 Herbicide Spills and Cleanups*

All appropriate precautions will be taken to avoid herbicide spills. In the event of a spill, cleanup will be immediate. Contractors will keep spill kits in their vehicles and in an appropriate storage shed to allow for quick and effective response to spills. Items included in the spill kit will be:

- Protective clothing and gloves;
- Adsorptive clay, "kitty litter," or other commercial adsorbent;
- Plastic bags and a bucket;
- A shovel;
- A fiber brush and screw-in handle;
- A dust pan;

- Caution tape;
- Highway flares (use on existing hard-top roads only); and
- Detergent.

Response to an herbicide spill will vary with the size and location of the spill, but general procedures include:

- Stopping the leak;
- Containing the spilled material;
- Traffic control;
- Dressing the clean-up team in protective clothing;
- Cleaning up and removing the spilled herbicide, as well as the contaminated adsorptive material and soil; and
- Transporting the spilled herbicide and contaminated material to an authorized disposal site.

#### *5.3.2.3 Herbicide Spill Reporting*

All herbicide contractors will have readily available copies of the appropriate material safety data sheets for the herbicides used at their disposal, and will keep copies of the material safety data sheets in the application vehicle. All herbicide spills will be reported in accordance with applicable laws and requirements. If a spill occurs, the appropriate agency and spill coordinators will be notified promptly. In case of a spill into wetlands and waterbodies, the appropriate federal, state, and county agencies will be notified immediately.

#### *5.3.2.4 Special Considerations*

The Certificate Holder will provide special consideration to intermittent and ephemeral streams/draws during treatment activities. No herbicide will be sprayed where the drift can enter standing water or saturated soil. It will be the herbicide applicators' responsibility to ensure that no herbicide or drift enters standing water, regardless of the season when the herbicide is applied. Similar considerations will be made when in proximity to agricultural fields and Laurent's milkvetch populations (Figure 1.3 and Figure 1.4). The qualified herbicide applicators should refer to the Facility's conservation plan (in progress) for Laurent's milkvetch for specific considerations for herbicide use in and near those populations.

# 6.0 Monitoring

A qualified investigator will be employed to annually assess noxious weed growth during the first five years of revegetation work and to make recommendations on noxious weed control measures. Reports will be submitted to the Certificate Holder, to ODOE, Oregon Department of Fish and Wildlife (ODFW), and Morrow County following each annual inspection. Annual noxious weed

inspections will occur across the entire WREFII through visual inspection of revegetated areas while driving and/or walking. These inspections will be used to inform ongoing noxious weed control efforts. Noxious weed monitoring sites to be included in the annual reports will correspond with the reference sites identified for revegetation monitoring success, described below. Note that revegetation monitoring and reporting frequency differs from the noxious weed monitoring and reporting discussed in this Plan. As described in the revegetation plan (Tetra Tech 2020), a qualified independent investigator (botanist or revegetation specialist) will inspect each revegetation area to assess the success of revegetation measures

In consultation with ODFW, revegetation reference sites—areas of habitat and quality similar to those found prior to disturbance at the areas to be revegetated—will be established to represent target conditions for revegetation areas. During each assessment, revegetated areas will be compared to reference sites with regard to:

- Presence and density of noxious weeds
- Degree of erosion
- Vegetative density
- Proportion of desirable vegetation
- Species diversity and structural stage of desirable vegetation

The goal is to control noxious weeds so that the density is equal to or less than the density of noxious weeds in the reference sites. Based on the success of control efforts after the fifth year of annual monitoring, the Certificate Holder will consult with ODOE and ODFW to design a long-term weed control plan. The Certificate Holder may propose remedial actions or additional monitoring for noxious weed areas that have not met the success criteria. The Certificate Holder will maintain ongoing communication with individual landowners, the Morrow County Weed Control Supervisor, and ODOE regarding noxious weeds within WREFII. Landowners may also contact the Certificate Holder directly to report the presence of noxious weeds related to Project activity. The Certificate Holder will control the noxious weeds on a case-by-case basis and prepare a summary of measures taken for that landowner. During operations of WREFII, the Certificate Holder will control noxious weeds as described in Section 5.3 in all revegetation areas.

The following contact information for the Morrow County Weed Control Supervisor will be used and updated as needed:

Dave Pranger, Weed Control Supervisor

Morrow County Public Works

365 West Highway 74

Lexington, OR 97839

(541) 989.9500

mcweed@co.morrow.or.us

# 7.0 References

DiTomaso, J.M., G.B. Kyser, S. R. Oneto, R. G. Wilson, S.B. Orloff, L.W. Anderson, S.D. Wright, J.A. Roncoroni, T.L. Miller, T. S. Prather, C. Ransom, K.G. Beck, C. Duncan, K.A. Wilson, and J. J. Mann. 2013. Weed Control in Natural Areas in the Western United States. Weed Research and Information Center, University of California. 544 pp.

EFSC (Energy Facility Siting Council). 2017a. Site Certificate for the Wheatridge Wind Energy Facility. Issued April 28, 2017.

EFSC. 2017b. First Amended Site Certificate for the Wheatridge Wind Energy Facility. Issued July 27, 2017.

EFSC. 2018a. Second Amended Site Certificate for the Wheatridge Wind Energy Facility. Issued, November 16, 2018.

EFSC. 2018b. Third Amended Site Certificate for the Wheatridge Wind Energy Facility. Issued December 14, 2018.

EFSC. 2019. Fourth Amended Site Certificate for the Wheatridge Wind Energy Facility. Issued November 22, 2019.

Kyser, G.B., J.M. DiTomaso, K.W. Davies, J.S. Davy, and B.S. Smith. 2014. Medusahead Management Guide for the Western States. University of California, Davis, Weed Research and Information Center.

Morrow County. 2019. Morrow Country Code Enforcement Ordinance. May 2019. Available online at: https://www.co.morrow.or.us/sites/default/files/fileattachments/planning/page/11881/2019_code_enforcement_final_.pdf. Accessed July 2019.

ODA (Oregon Department of Agriculture). 2019. Noxious Weed Policy and Classification System. Noxious Weed Control Program. Salem, OR. Available at: http://www.oregon.gov/ODA/shared/Documents/Publications/Weeds/NoxiousWeedPolicyClassification.pdf. Accessed July 2019.

Prather, T., T. Miller, A. Hulting, and E. Peachey. 2019. Control of Problem Weeds. In: Peachey, E. editor. Pacific Northwest Weed Management Handbook. Oregon State University. Corvallis, OR. P. Y-1 to Y-58.

Tetra Tech (Tetra Tech, Inc.). 2019. Wheatridge Wind Energy Facility 2019 Rare Plant Survey Report. September. Prepared for Wheatridge Wind Energy, LLC.

Tetra Tech. 2020. Wheatridge Renewable Energy Facility II Revegetation Plan. Prepared for Wheatridge Wind Energy, LLC.

# Figures

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# Location of Noxious Weeds Figure 1

## Wheatridge Renewable Energy Facility II

MORROW COUNTY, OR

Figure 1.1

Figure 1.2

Figure 1.3

Figure 1.4

Umatilla County

Morrow County

lone

Lexington

74

207

578

Noxious Weed Species

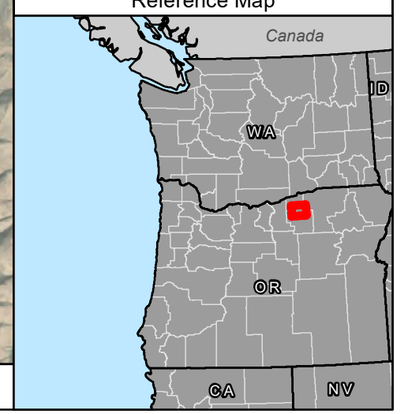
- Canada Thistle
- Cereal Rye
- Diffuse Knapweed
- Field Bindweed
- Jointed Goatgrass
- Kochia
- Medusahead Rye
- Rush Skeletonweed
- Scotch Thistle
- Spotted Knapweed
- Ventenata
- Yellow Starthistle
- Diffuse Knapweed and Jointed Goatgrass scattered throughout
- Jointed Goatgrass scattered throughout

- Wheatridge Renewable Energy Facility II Site Boundary
- Grid Index
- State Highway
- City/Town
- County Boundary
- Laurent's Milkvetch Observation

TETRA TECH

NEXTera ENERGY RESOURCES

Reference Map




1:105,000 WGS 1984 UTM Zone 11N

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NOT FOR CONSTRUCTION

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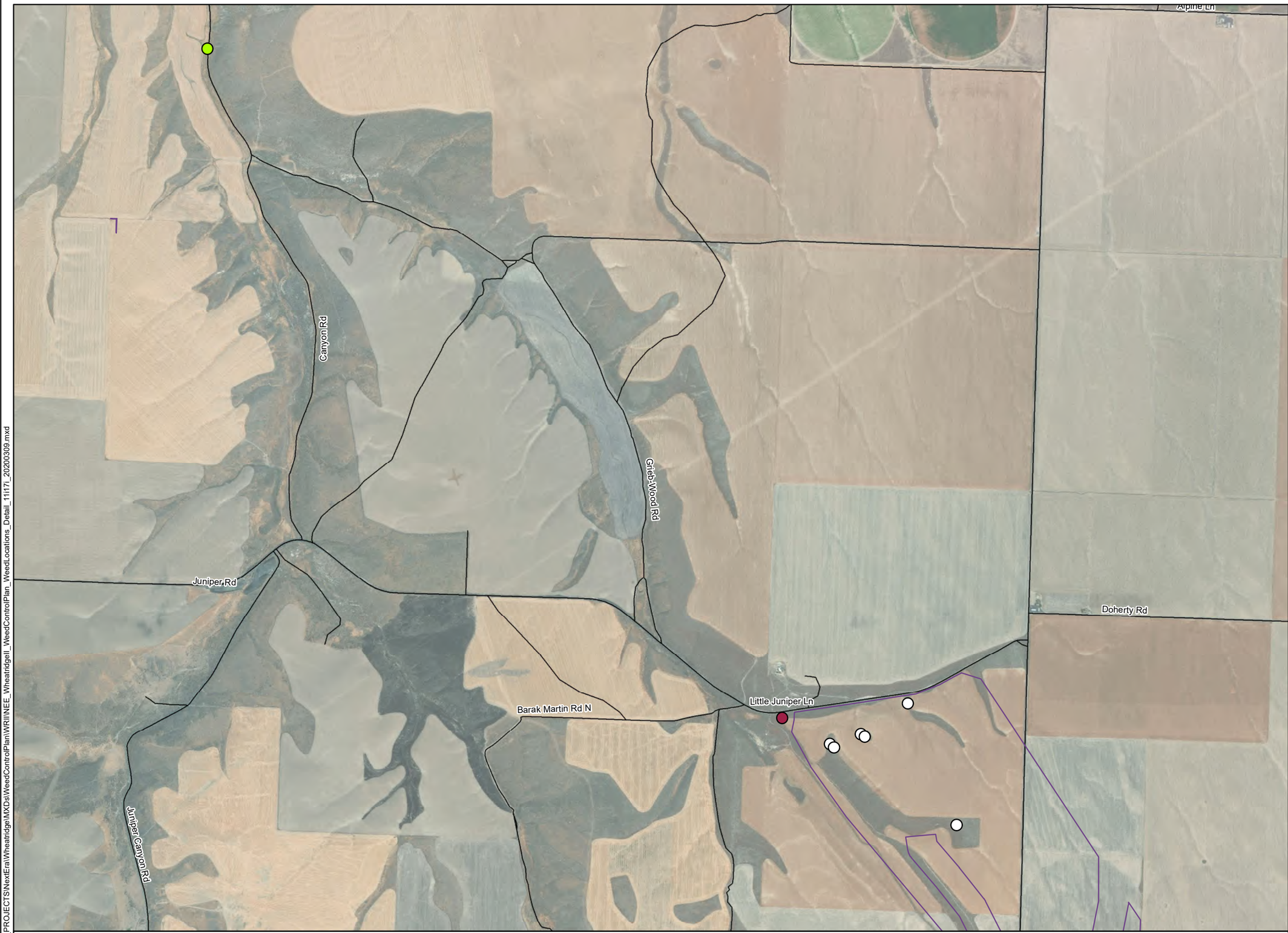



**Location of Noxious Weeds Figure 1.1**

# Wheatridge Renewable Energy Facility II

**MORROW COUNTY, OR**

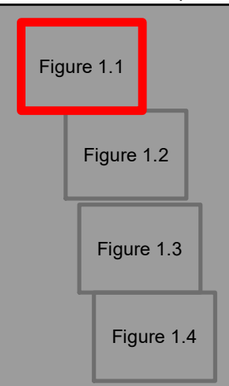
Wheatridge Renewable Energy Facility II Site Boundary
Local Road

Noxious Weed Species
- Diffuse Knapweed
- Rush Skeletonweed
- Scotch Thistle

TETRA TECH

NEXTera ENERGY RESOURCES

Reference Map

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Location of
Noxious Weeds
Figure 1.2

# Wheatridge Renewable Energy Facility II

MORROW COUNTY, OR

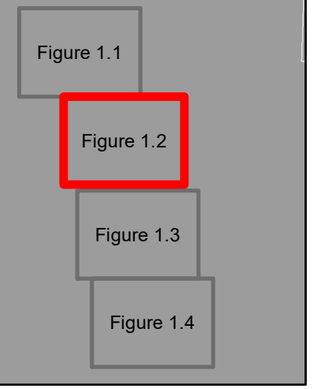
Wheatridge Renewable Energy Facility II Site Boundary
State Highway
Local Road

Noxious Weed Species
- Cereal Rye
- Diffuse Knapweed
- Jointed Goatgrass
- Kochia
- Rush Skeletonweed
- Scotch Thistle
- Spotted Knapweed
- Yellow Starthistle

TETRA TECH

NEXTera ENERGY RESOURCES

Reference Map




Barak Martin Rd N
Strawberry Rd
207
Sand Hollow Rd
Kemp Ln
Clark-Rice-Beach Rd
Kilkenny Rd

1:24,000 WGS 1984 UTM Zone 11N

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Location of
Noxious Weeds
Figure 1.3

# Wheatridge Renewable Energy Facility II

MORROW COUNTY, OR

- Wheatridge Renewable Energy Facility II Site Boundary
- State Highway
- Local Road
- Laurent's Milkvetch Observation

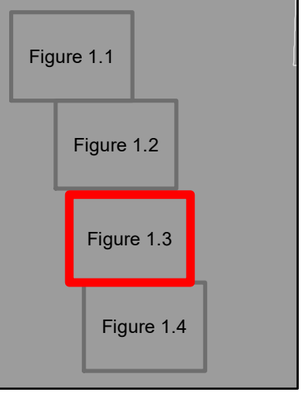
Noxious Weed Species

- Diffuse Knapweed
- Field Bindweed
- Jointed Goatgrass
- Rush Skeletonweed
- Spotted Knapweed

TETRA TECH

NEXTera ENERGY RESOURCES

Reference Map




Cutsforth Rd
Turner Rd
Airport Rd
Piper Canyon Rd
Dolven Rd

1:24,000 WGS 1984 UTM Zone 11N

0 0.25 0.5 1 1.5 2 Miles

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**Location of Noxious Weeds Figure 1.4**

# Wheatridge Renewable Energy Facility II

**MORROW COUNTY, OR**

- Wheatridge Renewable Energy Facility II Site Boundary
- Local Road
- Laurent's Milkvetch Observation

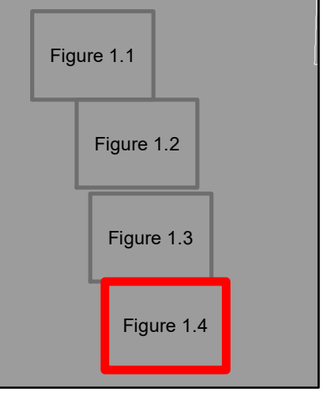
Noxious Weed Species

- Canada Thistle
- Diffuse Knapweed
- Field Bindweed
- Jointed Goatgrass
- Medusahead Rye
- Ventenata
- Diffuse Knapweed and Jointed Goatgrass scattered throughout
- Jointed Goatgrass scattered throughout

TETRA TECH

NEXTera ENERGY RESOURCES

Reference Map




Bell Canyon Loop

Blackhorse Canyon Ln

Blackhorse Canyon Rd

Dee Cox Rd

1:24,000 WGS 1984 UTM Zone 11N

0 0.25 0.5 1 1.5 2 Miles

NOT FOR CONSTRUCTION

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# Wheatridge Renewable Energy Facility I
# Wildlife Monitoring and Mitigation Plan

**Prepared for**
**Wheatridge Wind Energy, LLC**

**Prepared by**

TETRA TECH

**April 2020**
Effective Date: Wheatridge Renewable Energy Facility I Site Certificate Effective Date

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# 1.0 Introduction

This Wildlife Monitoring and Mitigation Plan (WMMP) has been prepared for the Wheatridge Renewable Energy Facility I (WREFI), a 100-MW wind energy facility in Morrow County. Wheatridge Wind Energy, LLC (Certificate Holder) holds the site certificate for WREFI. WREFI has areas of overlapping Site Boundary and shared related and supporting facilities with Wheatridge Renewable Energy Facility II (WREFII).

The two facilities were originally permitted as one facility, the Wheatridge Wind Energy Facility (WWEF). WWEF was granted approval of a site certificate by the Oregon Department of Energy's (ODOE) Energy Facility Siting Council (EFSC) on April 28, 2017 (EFSC 2017a) consisting of facilities in north Morrow (Wheatridge West) and Umatilla (Wheatridge East) counties[1]. Wheatridge West began construction in January 2020.

Prior to operation but after construction had commenced, WWEF was split into WREFI and WREF II. This WMMP has been prepared for WREFI but reflects the plan prepared for Wheatridge West as part of pre-construction compliance in coordination with and approved by the ODOE and Morrow County. This WMMP describes wildlife monitoring that the Certificate Holder shall conduct during operation of WREFI and includes the following components:

1. Fatality monitoring program, including:
    a. Removal trials;
    b. Searcher efficiency trials;
    c. Fatality search protocol; and
    d. Statistical analysis.
2. Raptor nesting surveys;
3. Wildlife Reporting and Handling System (WRHS);
4. Washington ground squirrel monitoring; and
5. Data reporting.

Based on the results of the monitoring program, mitigation of significant impacts may be required. The selection of the mitigation actions should allow for flexibility in creating appropriate responses to monitoring results that cannot be known in advance. If ODOE determines that mitigation is needed, the Certificate Holder shall propose appropriate mitigation actions to ODOE and shall carry out mitigation actions approved by ODOE, subject to review by the EFSC.

[1] The site certificate for the WWEF was amended five times, including the addition of solar energy generation and battery storage components and splitting the facility into WREFI and WREFII (EFSC 2017b, 2018a, 2018b, 2019).

# 2.0 Pre-Construction Compliance

The WMMP addresses the following pre-construction conditions of the Fourth Amended Site Certificate for the Facility (EFSC 2019):

> ***PRE-FW-02*** *Prior to construction, the certificate holder shall finalize and implement the Wildlife Monitoring and Mitigation Plan (WMMP) provided in Attachment F of this order, based on the final facility design, as approved by the department in consultation with ODFW.*
>
> > *a. The final WMMP must be submitted and ODOE's concurrence received prior to the beginning of construction. ODOE shall consult with ODFW on the final WMMP. The certificate holder shall implement the requirements of the approved WMMP during all phases of construction and operation of the facility.*
> >
> > *b. The WMMP may be amended from time to time by agreement of the certificate holder and the Oregon Energy Facility Siting Council ("Council"). Such amendments may be made without amendment of the site certificate. The Council authorizes the Department to agree to amendments to this plan. The Department shall notify the Council of all amendments, and the Council retains the authority to approve, reject, or modify any amendment of the WMMP agreed to by the Department.*
>
> ***PRE-TE-02*** *In accordance with Fish and Wildlife Habitat Condition 4, prior to construction, the certificate holder shall finalize and implement the Wildlife Monitoring and Mitigation Plan (WMMP) provided in Attachment F of this order, based on the final facility design, as approved by the department in consultation with ODFW. The final WMMP shall include a program to monitor potential impacts from facility operation on Washington ground squirrel. Monitoring shall be of any known colonies and shall be completed on the same schedule as the raptor nest monitoring for the facility. The monitoring surveys shall include returning to the known colonies to determine occupancy and the extent of the colony as well as a general explanation of the amount of use at the colony. If the colony is not found within the known boundary of the historic location a survey 500 feet out from the known colony will be conducted to determine if the colony has shifted over time. Any new colonies that are located during other monitoring activities, such as raptor nest monitoring surveys, shall be documented and the extent of those colonies should be delineated as well. These newly discovered colonies shall also be included in any future WGS monitoring activities.*

# 3.0 Fatality Monitoring – Wind Facility

Fatality monitoring objectives are to determine whether the Facility causes significant fatalities of birds and bats, which would indicate a loss in habitat quality. The Certificate Holder shall hire independent third-party investigators to perform fatality monitoring.

## 3.1 Methods

The following methods may be modified to reflect updated industry standards for performing post-construction fatality monitoring. Any updates to the fatality monitoring study design or data analysis methodology will be approved by ODOE prior to implementation.

### *3.1.1 Search Plots*

The investigators shall conduct fatality monitoring within search plots. The Certificate Holder, in consultation with the Oregon Department of Fish and Wildlife (ODFW), shall select search plots based on a systematic sampling design that ensures that the selected search plots are representative of the habitat conditions in different parts of the site. Each search plot will contain one turbine. Search plots will be square or circular. Circular search plots will be centered on the turbine location; radius will be determined with regard to maximum blade tip height and species of concern. Square search plots will be of sufficient size to contain a circular search plot as described above. The Certificate Holder shall provide maps of the search plots to ODOE before beginning fatality monitoring at the facility. The Certificate Holder shall use the same search plots for each search conducted during a monitoring year.

### *3.1.2 Scheduling*

Fatality monitoring will begin one month after commencement of commercial operation of the facility. Subsequent monitoring years will follow the same schedule (beginning in the same calendar month in the subsequent monitoring year). Over the course of one monitoring year, the investigators will conduct 16 searches. The frequency of searches by season is shown in Table 1.

**Table 1. Frequency of Fatality Monitoring Searches by Season**

| Season | Dates | Frequency |
|---|---|---|
| Spring Migration | March 16 to May 15 | 2 searches per month (4 searches) |
| Summer/Breeding | May 16 to August 15 | 1 search per month (3 searches) |
| Fall Migration | August 16 to October 31 | 2 searches per month (5 searches) |
| Winter | November 1 to March 15 | 1 search per month (4 searches) |

### *3.1.3 Sample Size*

The sample size for fatality monitoring is the number of turbines searched per monitoring year. The investigators shall conduct fatality monitoring during each monitoring year in search plots at one-third of the turbines that are built or 50 turbines, whichever is greater. If fewer than 50 turbines are built, the Certificate Holder shall search all turbines.

### *3.1.4 Duration of Fatality Monitoring*

The investigators shall perform one complete monitoring cycle during the first full year of facility operation (Year 1). At the end of the first year of monitoring, the Certificate Holder will report the results for joint evaluation by ODOE, the Certificate Holder, and ODFW. In the evaluation, the Certificate Holder shall compare the results for the Facility with the thresholds of concern described in Section 3.7 of this plan and with comparable data from other wind power facilities in the Columbia Basin, as available. The investigators will perform an additional year of monitoring in the fifth year of operations (Year 5) regardless of the results of the Year 1 study.

If fatality rates for the first year of monitoring at the Facility materially exceed any of the thresholds of concern or the range of fatality rates found at other wind power facilities in the region, the Certificate Holder shall propose additional mitigation for ODOE and ODFW review within 6 months after reporting the fatality rates to the ODOE. Alternatively, the Certificate Holder may opt to conduct a second year of fatality monitoring immediately if the certificate holder believes that the results of Year 1 monitoring were anomalous. If the Certificate Holder takes this option, the investigators still must perform the monitoring in Year 5 of operations as described above.

## 3.2 Removal Trials

The objective of the removal trials is to estimate the length of time avian and bat carcasses remain in the search area. Estimates of carcass removal rates will be used to adjust carcass counts for removal bias. “Carcass removal” is the disappearance of a carcass from the search area due to predation, scavenging, or other means, such as farming activity.

The investigators shall conduct carcass removal trials within each of the seasons defined in Table 1 during the first year of fatality monitoring. For each trial, the investigators shall use 10 to 15 carcasses of small- and large-bodied species. Trial carcasses shall be distributed within habitat categories and subtypes in proportion to their amounts within search plots.

After the first year of fatality monitoring, the investigators may reduce the number of removal trials and the number of removal trial carcasses during any subsequent year of fatality monitoring, subject to the approval of ODOE. The investigators must show that the reduction is justified based on a comparison of the first-year removal data with published removal data from nearby wind energy facilities.

The investigators shall use game birds or other legal sources of avian species as test carcasses for the removal trials. The investigators shall select species with the same coloration and size attributes as species found within the site boundary. If suitable trial carcasses are available, trials during the fall season will include several small brown birds and/or dark colored mice to simulate bat carcasses. Legally obtained bat carcasses will be used if available.

Trial carcasses will be marked discreetly for recognition by searchers and other personnel. Carcasses will be placed in a variety of postures to simulate a range of conditions. For example, birds will be:

1. Placed in an exposed posture (e.g., thrown over the shoulder);
2. Hidden to simulate a crippled bird (e.g., placed beneath a shrub or tuft of grass); or
3. Partially hidden.

The trial carcasses will be placed randomly within the carcass removal trial plots. Trial carcasses will be left in place until the end of the carcass removal trial.

An approximate schedule for assessing removal status is once daily for the first 4 days, and on days 7, 10, 14, 21, 28 and 35. This schedule may be adjusted depending on actual carcass removal rates, weather conditions and coordination with the other survey work. The condition of scavenged carcasses will be documented during each assessment, and at the end of the trial all traces of the carcasses will be removed from the site. Scavenger or other activity could result in complete removal of all traces of a carcass in a location or distribution of feathers and carcass parts to several locations. This distribution will not constitute removal if evidence of the carcass remains within an area similar in size to a search plot and if the evidence would be discernable to a searcher during a normal survey.

Before beginning removal trials for any subsequent year of fatality monitoring, the Certificate Holder shall report the results of the first year of removal trials to ODOE and ODFW. In the report, the Certificate Holder shall analyze whether four removal trials per year, as described above, provide sufficient data to accurately estimate adjustment factors for carcass removal. The number of removal trials may be adjusted up or down, subject to the approval of ODOE.

## 3.3 Searcher Efficiency Trials

The objective of searcher efficiency trials is to estimate the percentage of bird and bat fatalities that searchers are able to find. The investigators shall conduct searcher efficiency trials on the fatality monitoring search plots in both grassland/shrub-steppe and cultivated agriculture habitat types. A pooled estimate of searcher efficiency may be used—if sample sizes are too small for some habitat types—to adjust carcass counts for detection bias.

The investigators shall conduct searcher efficiency trials within each of the seasons defined in Table 1 during the years in which the fatality monitoring occurs. Each trial will involve approximately 4 to 15 carcasses. The searchers will not be notified of carcass placement or test dates. The investigators shall vary the number of trials per season and the number of carcasses per trial so that the searchers will not know the total number of trial carcasses being used in any trial. In total, approximately 80 carcasses will be used per year, or approximately 15 to 25 per season.

For each trial, the investigators shall use small- and large-bodied species. The investigators shall use game birds or other legal sources of avian species as test carcasses for the efficiency trials, and the investigators may use carcasses found in fatality monitoring searches. The investigators shall

select species with the same coloration and size attributes as species found within the site boundary. If suitable test carcasses are available, trials during the fall season will include several small brown birds and/or dark mice to simulate bat carcasses.

Legally obtained bat carcasses will be used if available. The investigators shall mark the test carcasses to differentiate them from other carcasses that might be found within the search plot and shall use methods similar to those used to mark removal test carcasses as long as the procedure is sufficiently discreet and does not increase carcass visibility.

The Certificate Holder shall distribute trial carcasses in varied habitat in rough proportion to the habitat types within the facility site. On the day of a standardized fatality monitoring search (described below) but before the beginning of the search, investigators will place efficiency trial carcasses randomly within search plots (one to three trial carcasses per search plot) within areas to be searched. If scavengers appear attracted by placement of carcasses, the carcasses will be distributed before dawn.

Search efficiency trials will be spread over the entire season to incorporate effects of varying weather and vegetation growth.

The number and location of the efficiency trial carcasses found during the carcass search will be recorded. The number of efficiency trial carcasses available for detection during each trial will be determined immediately after the trial by the person responsible for distributing the carcasses. Following plot searches, all traces of test carcasses will be removed from the site. If new searchers are brought into the search team, additional searcher efficiency trials will be conducted to ensure that detection rates incorporate searcher differences. The Certificate Holder shall include a discussion of any changes in search personnel and any additional detection trials in the reporting required under Section 7.0 of this plan.

Before beginning searcher efficiency trials for any subsequent year of fatality monitoring, the Certificate Holder shall report the results of the first-year efficiency trials to ODOE and ODFW. In the report, the Certificate Holder shall analyze whether the efficiency trials as described above provide sufficient data to accurately estimate adjustment factors for searcher efficiency. The number of searcher efficiency trials for any subsequent year of fatality monitoring may be adjusted up or down, subject to the approval of ODOE.

## 3.4 Fatality Monitoring Search Protocol

The objective of fatality monitoring is to estimate the number of bird and bat fatalities that are attributable to facility operation as an indicator of the impact of the facility on habitat quality. The goal of bird and bat fatality monitoring is to estimate fatality rates and associated variances. The investigators shall perform fatality monitoring using standardized carcass searches according to the schedule described above.

Personnel trained in proper search techniques (“the searchers”) will conduct the carcass searches by walking concentric or parallel transects (with transect width determined by the species of

concern) within search plots. Search area and speed may be adjusted by habitat type after evaluation of the first searcher efficiency trial.

Searchers shall flag all avian or bat carcasses discovered. Carcasses are defined as a complete carcass or body part, 10 or more feathers or three or more primary feathers in one location. When parts of carcasses and feathers from the same species are found within a search plot, searchers shall make note of the relative positions and assess whether or not these are from the same fatality.

All carcasses (avian and bat) found during the standardized carcass searches will be photographed, recorded and labeled with a unique number. Searchers shall make note of the nearest turbine and the approximate distance from the carcass to the turbine. The species and age of the carcass will be determined when possible. Searchers shall note the extent to which the carcass is intact and estimate time since death. Searchers shall describe all evidence that might assist in determination of cause of death, such as evidence of electrocution, vehicular strike, wire strike, predation or disease. Searchers will photograph each carcass as found and will map the find on a detailed map of the search area showing the location of the wind turbines and associated facilities.

If the necessary permits have been acquired through appropriate state and federal wildlife agencies, each carcass will be bagged and frozen for future reference or (if the carcass is fresh and whole) for use in trials. A copy of the data sheet for each carcass will be kept with the carcass at all times. When assessment of the carcass is complete, all traces of it will be removed from the site. If permits are not acquired by the Certificate Holder, the carcass will be left as found.

The investigators shall calculate fatality rates using the statistical methods described in Section 3.6. If the Certificate Holder or their investigators determines that a different statistical method is more appropriate, those methods shall be reviewed and approved by ODOE. In making these calculations, the investigators may exclude carcass data from the first search (clearance survey) of each turbine plot to eliminate possible counting of carcasses that were present before the turbine was operating.

The investigators shall estimate the number of avian and bat fatalities attributable to operation of the facility based on the number of avian and bat fatalities found at the facility site. All carcasses located within areas surveyed, regardless of species, will be recorded and, if possible, a cause of death determined. If a different cause of death is not apparent, the fatality will be attributed to facility operation. The total number of avian and bat fatalities will be estimated by adjusting for removal and searcher efficiency bias.

On an annual basis, the Certificate Holder shall report an estimate of fatalities in nine categories, provided a sufficient number of detections are available to accurately determine estimates for each. The Certificate Holder shall report annual fatality rates on both a per-MW and per-turbine basis. The nine categories are:

1. All birds;
2. Small birds;
3. Large birds;
4. Raptors;

5. Raptor species of special concern;
6. Grassland species;
7. Nocturnal migrants;
8. State and federally listed threatened and endangered species and State Sensitive Species listed under OAR 635-100-0040; and
9. Bats.

## 3.5 Incidental Finds and Injured Birds

The searchers might discover carcasses incidental to formal carcass searches (incidental finds), such as when driving through the project area. For each incidental find, the searcher shall identify, photograph, record data and collect the carcass (or leave as-is) as would be done for carcasses within the formal search sample during scheduled searches. If the incidental find is located in a formal search plot within a reasonable timeframe from when that plot was officially searched (e.g., same day), the fatality data will be included in the calculation of fatality rates. If the incidental find is found outside a formal search plot, the data will be reported separately.

The Certificate Holder shall contact a qualified rehabilitation specialist approved by ODOE[2] to respond to injured wildlife. The Certificate Holder shall pay costs, if any, charged for time and expenses related to care and rehabilitation of injured native birds found on the site, unless the cause of injury is clearly demonstrated to be unrelated to the facility operations.

## 3.6 Statistical Methods for Fatality Estimates (Shoenfeld Estimator)

The estimate of the total number of wind facility-related fatalities is based on:

1. The observed number of carcasses found during standardized searches during the two monitoring years for which the cause of death is attributed to the facility.[3]
2. Searcher efficiency expressed as the proportion of planted carcasses found by searchers.
3. Removal rates expressed as the estimated average probability a carcass is expected to remain in the study area and be available for detection by the searchers during the entire survey period.

### *3.6.1 Definition of Variables*

The following variables are used in the equations below:

$c_i$ the number of carcasses detected at plot i for the study period of interest (e.g., one year) for which the cause of death is either unknown or is attributed to the facility

[2] Approved specialists include of Blue Mountain Wildlife, a wildlife rehabilitation center in Pendleton, and the Audubon Bird Care Center in Portland. The Certificate Holder must obtain ODOE approval before using other specialists.
[3] If a different cause of death is not apparent, the fatality will be attributed to facility operation.

$n$ the number of search plots

$k$ the number of turbines searched (includes the turbines centered within each search plot and a proportion of the number of turbines adjacent to search plots to account for the effect of adjacent turbines on the search plot buffer area)

$\bar{c}$ the average number of carcasses observed per turbine per year

$s$ the number of carcasses used in removal trials

$s_c$ the number of carcasses in removal trials that remain in the study area after 35 days

$se$ standard error (square of the sample variance of the mean)

$t_i$ the time (days) a carcass remains in the study area before it is removed

$\bar{t}$ the average time (days) a carcass remains in the study area before it is removed

$d$ the total number of carcasses placed in searcher efficiency trials

$p$ the estimated proportion of detectable carcasses found by searchers

$I$ the average interval between searches in days

$\hat{\pi}$ the estimated probability that a carcass is both available to be found during a search and is found

$m_t$ the estimated annual average number of fatalities per turbine per year, adjusted for removal and observer detection bias

C nameplate energy output of turbine in megawatts (MW)

### *3.6.2 Observed Number of Carcasses*

The estimated average number of carcasses ($\bar{c}$) observed per turbine per year is:

$$\bar{c} = \frac{\sum_{i=1}^{n} c_i}{k}$$

### *3.6.3 Estimation of Carcass Removal*

Estimates of carcass removal are used to adjust carcass counts for removal bias. Mean carcass removal time ($\bar{t}$) is the average length of time a carcass remains at the site before it is removed:

$$\bar{t} = \frac{\sum_{i=1}^{n} t_i}{s - s_c}$$

This estimator is the maximum likelihood estimator assuming the removal times follow an exponential distribution and there is right-censoring of data. Any trial carcasses still remaining at 35 days are collected, yielding censored observations at 35 days. If all trial carcasses are removed before the end of the trial, then $s_c$ is 0, and $\bar{t}$ is just the arithmetic average of the removal times. Removal rates will be estimated by carcass size (small and large), habitat type and season.

### *3.6.4 Estimation of Observer Detection Rates*

Observer detection rates (i.e., searcher efficiency rates) are expressed as $p$, the proportion of trial carcasses that are detected by searchers. Observer detection rates will be estimated by carcass size, habitat type and season.

### *3.6.5 Estimation of Facility-Related Fatality Rates*

The estimated per turbine annual fatality rate ($m_t$) is calculated by:

$$m_t = \frac{\bar{c}}{\hat{\pi}}$$

Where $\hat{\pi}$ includes adjustments for both carcass removal (from scavenging and other means) and observer detection bias assuming that the carcass removal times $t_i$ follow an exponential distribution. Under these assumptions, this detection probability is estimated by:

$$\hat{\pi} = \frac{\bar{t} \cdot p}{I} \cdot \left[ \frac{\exp\left(I/\bar{t}\right) - 1}{\exp\left(I/\bar{t}\right) - 1 + p} \right]$$

The estimated per MW annual fatality rate (m) is calculated by:

$$m = \frac{m_t}{C}$$

The final reported estimates of $m$ associated standard errors and 90% confidence intervals will be calculated using bootstrapping (Manly 1997). Bootstrapping is a computer simulation technique that is useful for calculating point estimates, variances and confidence intervals for complicated test statistics. For each iteration of the bootstrap, the plots will be sampled with replacement, trial carcasses will be sampled with replacement, and $\bar{c}, \bar{t}, p, \hat{\pi}$^ and $m$ will be calculated. A total of 5,000 bootstrap iterations will be used. The reported estimates will be the means of the 5,000 bootstrap estimates. The standard deviation of the bootstrap estimates is the estimated standard error. The lower 5th and upper 95th percentiles of the 5000 bootstrap estimates are estimates of the lower limit and upper limit of 90% confidence intervals.

## 3.7 Mitigation

The Certificate Holder shall use best available science to resolve any uncertainty in the fatality monitoring results and to determine whether the data indicate that additional mitigation should be considered. ODOE may require additional, targeted monitoring if the data indicate the potential for significant impacts that cannot be addressed by worst-case analysis and appropriate mitigation.

Mitigation may be appropriate if fatality rates exceed a "threshold of concern."[4] For the purpose of determining whether a threshold has been exceeded, the Certificate Holder shall calculate the

[4] EFSC adopted "thresholds of concern" for raptors, grassland species, and state sensitive avian species in the Final Order on the Application for the Klondike III Wind Project (June 30, 2006) and for bats in the Final Order on the Application for the Biglow Canyon Wind Farm (June 30, 2006). As explained in the Klondike III

average annual fatality rates for species groups after each year of monitoring, provided a sufficient number of detections are available to accurately determine estimates for these groups. Based on current knowledge of the species that are likely to use the habitat in the area of the facility, the thresholds shown in Table 2 apply to the Facility.

**Table 2. Fatality Thresholds of Concern by Species Group**

| Species Group | Threshold of Concern (Fatalities per MW) |
|---|---|
| Raptors<br>(All eagles, hawks, falcons and owls, including burrowing owls.) | 0.09 |
| Raptor species of special concern<br>(Swainson's hawk, ferruginous hawk, peregrine falcon, golden eagle, bald eagle, burrowing owl.) | 0.06 |
| Grassland species<br>(All native bird species that rely on grassland habitat and are either resident species occurring year round or species that nest in the area, excluding horned lark, burrowing owl and northern harrier.) | 0.59 |
| State sensitive avian species listed under OAR 635-100-0040 (Excluding raptors listed above.) | 0.2 |
| Bat species as a group | 2.5 |

If the data show that a threshold of concern for an avian species group has been exceeded, the Certificate Holder shall implement mitigation if ODOE determines that mitigation is appropriate based on analysis of the data, consultation with ODFW, and consideration of any other significant information available at the time. In addition, ODOE may determine that mitigation is appropriate if fatality rates for individual avian or bat species (especially State Sensitive Species) are higher than expected and at a level of biological concern. If ODOE determines that mitigation is appropriate, the Certificate Holder, in consultation with ODOE and ODFW, shall propose mitigation measures designed to benefit the affected species. Acceptable mitigation may include, but is not limited to, contributions to wildlife rehabilitators, funding of research by third parties on local raptor populations, or habitat mitigation. This may take into consideration whether the mitigation required or provided in conjunction with raptor nest monitoring, habitat mitigation, or other components of the Wildlife Monitoring and Mitigation Plan or Habitat Mitigation Plan, would also benefit the affected species.

order: "Although the threshold numbers provide a rough measure for deciding whether the Council should be concerned about observed fatality rates, the thresholds have a very limited scientific basis. The exceeding of a threshold, by itself, would not be a scientific indicator that operation of the facility would result in range-wide population level declines of any of the species affected. The thresholds are provided in the Wildlife Monitoring and Mitigation Plan to guide consideration of additional mitigation based on two years of monitoring data."

The Certificate Holder shall implement mitigation as approved by ODOE, subject to review by EFSC. ODOE may recommend additional, targeted data collection if the need for mitigation is unclear based on the information available at the time. The Certificate Holder shall implement such data collection as approved by EFSC.

The Certificate Holder shall design mitigation to benefit the affected species group. Mitigation may include, but is not limited to, protection of nesting habitat for the affected group of native species through a conservation easement or similar agreement. Tracts of land that are intact and functional for wildlife are preferable to degraded habitat areas. Preference should be given to protection of land that would otherwise be subject to development or use that would diminish the wildlife value of the land. In addition, mitigation measures might include: enhancement of the protected tract by weed removal and control; increasing the diversity of native grasses and forbs; planting sagebrush or other shrubs; constructing and maintaining artificial nest structures for raptors; improving wildfire response; and conducting or making a contribution to research that will aid in understanding more about the affected species and its conservation needs in the region.

If the data show that the threshold of concern for bat species as a group has been exceeded, the Certificate Holder shall implement mitigation if ODOE determines that mitigation is appropriate based on analysis of the data, consultation with ODFW, and consideration of any other significant information available at the time. For example, if the threshold for bat species as a group is exceeded, the Certificate Holder may contribute to Bat Conservation International or to a Pacific Northwest bat conservation group to fund new or ongoing research in the Pacific Northwest to better understand wind facility impacts to bat species and to develop possible ways to reduce impacts to the affected species.

# 4.0 Raptor Nest Surveys

The objectives of raptor nest surveys are: (1) count raptor nests on the ground or aboveground in trees or other aboveground nest locations in the vicinity of the facility; and (2) to determine whether there are noticeable changes in nesting activity or nesting success in the local populations of the following raptor species: Swainson's hawk (*Buteo swainsoni*), golden eagle (*Aquila chrysaetos*), and ferruginous hawk (*Buteo regalis*).

The Certificate Holder shall conduct short-term and long-term monitoring. The investigators will use aerial and ground surveys to evaluate nest success by gathering data on active nests, on nests with young, and on young fledged. The Certificate Holder shall employ qualified investigators to perform raptor nest surveys.

## 4.1 Short-Term Monitoring

Short-term monitoring will be done in two monitoring seasons. The first monitoring season will be in the first raptor nesting season after completion of construction of the facility. The second monitoring season will be in the fourth year after construction is completed. The Certificate Holder shall provide a summary of the first-year results in the monitoring report described in Section 6.0.

After the second monitoring season, the investigators will analyze two years of data compared to the baseline data.

During each monitoring season, the investigators will conduct a minimum of one aerial and one ground survey for raptor nests in late May or early June and additional surveys as described in this section. The survey area is the area within the facility site and a 2-mile buffer zone around the site. For the ground surveys while checking for nesting success (conducted within the facility site and up to a maximum of ½ mile from the facility site), nests outside the leased project boundary will be checked from an appropriate distance where feasible, depending on permission from the landowner for access.

All nests discovered during pre-construction surveys and any nests discovered during post-construction surveys, whether active or inactive, will be given identification numbers. Global positioning system (GPS) coordinates will be recorded for each nest. Locations of inactive nests will be recorded because they could become occupied during future years.

Determining nest occupancy may require one or two visits to each nest. Aerial surveys for nest occupancy will be conducted within the facility site and a 2-mile buffer. For occupied nests, the Certificate Holder will determine nesting success by a minimum of one ground visit to determine the species, number of young and young fledged within the facility site and up to 0.5 miles from the facility site. "Nesting success" means that the young have successfully fledged (the young are independent of the core nest site).

## 4.2 Long-Term Monitoring

In addition to the two years of post-construction short-term raptor nest surveys described in Section 4.1, the investigators shall conduct long-term raptor nest surveys at 5-year intervals for the life of the facility.[5] Investigators will conduct the first long-term raptor nest survey in the raptor nesting season of the ninth year after construction is completed and will repeat the survey at 5-year intervals thereafter. In conducting long-term surveys, the investigators will follow the same survey protocols as described in Section 4.1 unless the investigators propose alternative protocols that are approved by ODOE. In developing an alternative protocol, the investigators will consult with ODFW and will take into consideration other raptor nest monitoring conducted in adjacent areas. The investigators will analyze the data—as a way of determining trends in the number of raptor breeding attempts the facility supports and the success of those attempts—and will submit a report after each year of long-term raptor nest surveys.

# 5.0 Wildlife Reporting and Handling System

The Wildlife Reporting and Handling System (WRHS) is a voluntary monitoring program to search for and handle avian and bat casualties found by maintenance personnel during operation of the

[5] As used in this plan, "life of the facility" means continuously until the facility site is restored and the site certificate is terminated in accordance with OAR 345-027-0110.

facility. Objectives of the WRHS are to meet the standards specified in any other requirement (federal, state, county) for understanding and documenting species found over time. Maintenance personnel will be trained in the methods needed to carry out this program. This monitoring program includes the initial response, handling and reporting of bird and bat carcasses discovered incidental to maintenance operations. This is a voluntary program and may be discounted by the Certificate Holder at any time.

All avian and bat carcasses discovered by maintenance personnel will be photographed and data will be recorded as would be done for carcasses within the formal search sample during scheduled searches. If maintenance personnel discover incidental finds, the maintenance personnel will notify a project biologist. If the necessary permits have been acquired through appropriate state and federal wildlife agencies, the project biologist will collect the carcass or will instruct maintenance personnel to have an on-site carcass handling permittee collect the carcass.

During the years in which fatality monitoring occurs, if maintenance personnel discover incidental finds outside the search plots for the fatality monitoring searches, the data will be reported separately from fatality monitoring data. If maintenance personnel discover carcasses within search plots, the data will be included in the calculation of fatality rates. Maintenance personnel will notify a project biologist for any incidental finds.

# 6.0 Washington Ground Squirrel Monitoring

In compliance with the pre-construction condition PRE-TE-02, Washington ground squirrel (*Urocitellus washingtoni*) pre-construction surveys were performed to determine operations monitoring requirements. No Washington ground squirrel colonies were identified during pre-construction surveys; therefore, no monitoring is planned at this time. However, if new colonies are located during other monitoring activities or incidentally during operations, the Certificate Holder shall document and delineate the colonies, and shall amend the WMMP with a Washington ground squirrel monitoring program in consultation with ODOE.

# 7.0 Data Reporting

The Certificate Holder will report wildlife monitoring data and analysis to ODOE for each calendar year in which wildlife monitoring occurs. Monitoring data include fatality monitoring program data, raptor nest survey data, and WRHS data. The Certificate Holder may include the reporting of wildlife monitoring data and analysis in the annual report required under OAR 345-026-0080 or submit this information as a separate document at the same time the annual report is submitted. In addition, the Certificate Holder shall provide to ODOE any data or record generated in carrying out this monitoring plan upon request by ODOE.

The Certificate Holder shall notify USFWS and ODFW if any federal or state endangered or threatened species are killed or injured on the facility site within 24 hours of species identification.

# 8.0 Amendment of the Plan

This WMMP may be amended from time to time by agreement of the Certificate Holder and EFSC. Such amendments may be made without amendment of the site certificate. EFSC authorizes ODOE to agree to amendments to this plan and to mitigation actions that may be required under this plan. ODOE shall notify EFSC of all amendments and mitigation actions, and EFSC retains the authority to approve, reject or modify any amendment of this plan or mitigation action agreed to by ODOE.

# 9.0 References

EFSC (Energy Facility Siting Council). 2017a. Site Certificate for the Wheatridge Wind Energy Facility. Issued April 28, 2017.

EFSC. 2017b. First Amended Site Certificate for the Wheatridge Wind Energy Facility. Issued July 27, 2017.

EFSC. 2018a. Second Amended Site Certificate for the Wheatridge Wind Energy Facility. Issued, November 16, 2018.

EFSC. 2018b. Third Amended Site Certificate for the Wheatridge Wind Energy Facility. Issued December 14, 2018.

EFSC. 2019. Fourth Amended Site Certificate for the Wheatridge Wind Energy Facility. Issued November 22, 2019.

# Wheatridge Renewable Energy Facility II
# Wildlife Monitoring and Mitigation Plan

**Prepared for**
**Wheatridge Wind II, LLC**

**Prepared by**


**April 2020**
Effective Date: Wheatridge Renewable Energy Facility II Site Certificate Effective Date

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# 1.0 Introduction

This Wildlife Monitoring and Mitigation Plan (WMMP) has been prepared for the Wheatridge Renewable Energy Facility II (WREFII) West, a 200-megawatt (MW) wind energy facility in Morrow County. Wheatridge Wind II, LLC (Certificate Holder) holds the site certificate for WREFII. WREFII has areas of overlapping Site Boundary and shared related and supporting facilities with Wheatridge Renewable Energy Facility I (WREFI; Wheatridge Wind Energy, LLC is the certificate holder).

The two facilities were originally permitted as one facility, the Wheatridge Wind Energy Facility (WWEF). WWEF was granted approval of a site certificate by the Oregon Department of Energy's (ODOE) Energy Facility Siting Council (EFSC) on April 28, 2017 (EFSC 2017a), consisting of facilities in north Morrow (Wheatridge West) and Umatilla (Wheatridge East) counties[1]. Wheatridge West began construction in January 2020.

Prior to operation, but after construction had commenced, WWEF was split into WREFI and WREFII. WREFI is a 100-MW wind energy facility within the Wheatridge West portion of the WWEF. WREF II is a 400-MW wind energy and 150-MW solar energy and battery storage facility within Wheatridge West and Wheatridge East. Of the 400 MW of wind energy in WREFII, 200 MW are located within Wheatridge West and are referred to as WREFII West. This WMMP has been prepared for WREFII West, but reflects the plan prepared for Wheatridge West as part of pre-construction compliance in coordination with, and approved by, ODOE and Morrow County. The Certificate Holder will amend this WMMP or prepare separate WMMPs for the remaining portions of WREFII prior to construction of those facilities.

This WMMP has been prepared for WREFII but reflects the WMMP prepared for Wheatridge West as part of pre-construction compliance in coordination with and as approved by ODOE and the Oregon Department of Fish and Wildlife (ODFW). This WMMP describes wildlife monitoring that the Certificate Holder shall conduct during operation of WREFII and includes the following components:

1. Fatality monitoring program, including:
    a. Removal trials;
    b. Searcher efficiency trials;
    c. Fatality search protocol; and
    d. Statistical analysis.
2. Raptor nesting surveys;
3. Wildlife Reporting and Handling System (WRHS);

[1] The site certificate for the WWEF was amended five times, including the addition of solar energy generation and battery storage components and splitting the facility into WREFI and WREFII (EFSC 2017b, EFSC 2018a, EFSC 2018b, EFSC 2019).

4. Washington ground squirrel monitoring; and
5. Data reporting.

Based on the results of the monitoring program, mitigation of significant impacts may be required. The selection of the mitigation actions should allow for flexibility in creating appropriate responses to monitoring results that cannot be known in advance. If ODOE determines that mitigation is needed, the Certificate Holder shall propose appropriate mitigation actions to ODOE and shall carry out mitigation actions approved by ODOE, subject to review by the EFSC.

# 2.0 Pre-Construction Compliance

The WMMP addresses the following pre-construction conditions of the Fourth Amended Site Certificate for the Facility (EFSC 2019):

> ***PRE-FW-02*** *Prior to construction, the certificate holder shall finalize and implement the Wildlife Monitoring and Mitigation Plan (WMMP) provided in Attachment F of this order, based on the final facility design, as approved by the department in consultation with ODFW.*
>
> > *a. The final WMMP must be submitted and ODOE's concurrence received prior to the beginning of construction. ODOE shall consult with ODFW on the final WMMP. The certificate holder shall implement the requirements of the approved WMMP during all phases of construction and operation of the facility.*
> >
> > *b. The WMMP may be amended from time to time by agreement of the certificate holder and the Oregon Energy Facility Siting Council ("Council"). Such amendments may be made without amendment of the site certificate. The Council authorizes the Department to agree to amendments to this plan. The Department shall notify the Council of all amendments, and the Council retains the authority to approve, reject, or modify any amendment of the WMMP agreed to by the Department.*
>
> ***PRE-TE-02*** *In accordance with Fish and Wildlife Habitat Condition 4, prior to construction, the certificate holder shall finalize and implement the Wildlife Monitoring and Mitigation Plan (WMMP) provided in Attachment F of this order, based on the final facility design, as approved by the department in consultation with ODFW. The final WMMP shall include a program to monitor potential impacts from facility operation on Washington ground squirrel. Monitoring shall be of any known colonies and shall be completed on the same schedule as the raptor nest monitoring for the facility. The monitoring surveys shall include returning to the known colonies to determine occupancy and the extent of the colony as well as a general explanation of the amount of use at the colony. If the colony is not found within the known boundary of the historic location a survey 500 feet out from the known colony will be conducted to determine if the colony has shifted over time. Any new colonies that are located during other monitoring activities, such as raptor nest monitoring surveys, shall be documented and the extent of those colonies should be delineated as well. These newly discovered colonies shall also be included in any future WGS monitoring activities.*

# 3.0 Fatality Monitoring – Wind Facility

Fatality monitoring objectives are to determine whether the Facility causes significant fatalities of birds and bats, which would indicate a loss in habitat quality. The Certificate Holder shall hire independent third-party investigators to perform fatality monitoring.

## 3.1 Methods

The following methods may be modified to reflect updated industry standards for performing post-construction fatality monitoring. Any updates to the fatality monitoring study design or data analysis methodology will be approved by ODOE prior to implementation.

### *3.1.1 Search Plots*

The investigators shall conduct fatality monitoring within search plots. The Certificate Holder, in consultation with ODFW, shall select search plots based on a systematic sampling design that ensures that the selected search plots are representative of the habitat conditions in different parts of the site. Each search plot will contain one turbine. Search plots will be square or circular. Circular search plots will be centered on the turbine location; radius will be determined with regard to maximum blade tip height and species of concern. Square search plots will be of sufficient size to contain a circular search plot as described above. The Certificate Holder shall provide maps of the search plots to ODOE before beginning fatality monitoring at the facility. The Certificate Holder shall use the same search plots for each search conducted during a monitoring year.

### *3.1.2 Scheduling*

Fatality monitoring will begin one month after commencement of commercial operation of the facility. Subsequent monitoring years will follow the same schedule (beginning in the same calendar month in the subsequent monitoring year). Over the course of one monitoring year, the investigators will conduct 16 searches. The frequency of searches by season is shown in Table 1.

**Table 1. Frequency of Fatality Monitoring Searches by Season**

| Season | Dates | Frequency |
|---|---|---|
| Spring Migration | March 16 to May 15 | 2 searches per month (4 searches) |
| Summer/Breeding | May 16 to August 15 | 1 search per month (3 searches) |
| Fall Migration | August 16 to October 31 | 2 searches per month (5 searches) |
| Winter | November 1 to March 15 | 1 search per month (4 searches) |

### *3.1.3 Sample Size*

The sample size for fatality monitoring is the number of turbines searched per monitoring year. The investigators shall conduct fatality monitoring during each monitoring year in search plots at one-third of the turbines that are built or 50 turbines, whichever is greater. If fewer than 50 turbines are built, the Certificate Holder shall search all turbines.

### *3.1.4 Duration of Fatality Monitoring*

The investigators shall perform one complete monitoring cycle during the first full year of facility operation (Year 1). At the end of the first year of monitoring, the Certificate Holder will report the results for joint evaluation by ODOE, the Certificate Holder, and ODFW. In the evaluation, the Certificate Holder shall compare the results for the Facility with the thresholds of concern described in Section 3.7 of this plan and with comparable data from other wind power facilities in the Columbia Basin, as available. The investigators will perform an additional year of monitoring in the fifth year of operations (Year 5) regardless of the results of the Year 1 study.

If fatality rates for the first year of monitoring at the Facility materially exceed any of the thresholds of concern or the range of fatality rates found at other wind power facilities in the region, the Certificate Holder shall propose additional mitigation for ODOE and ODFW review within 6 months after reporting the fatality rates to the ODOE. Alternatively, the Certificate Holder may opt to conduct a second year of fatality monitoring immediately if the certificate holder believes that the results of Year 1 monitoring were anomalous. If the Certificate Holder takes this option, the investigators still must perform the monitoring in Year 5 of operations as described above.

## 3.2 Removal Trials

The objective of the removal trials is to estimate the length of time avian and bat carcasses remain in the search area. Estimates of carcass removal rates will be used to adjust carcass counts for removal bias. “Carcass removal” is the disappearance of a carcass from the search area due to predation, scavenging, or other means, such as farming activity.

The investigators shall conduct carcass removal trials within each of the seasons defined in Table 1 during the first year of fatality monitoring. For each trial, the investigators shall use 10 to 15 carcasses of small- and large-bodied species. Trial carcasses shall be distributed within habitat categories and subtypes in proportion to their amounts within search plots.

After the first year of fatality monitoring, the investigators may reduce the number of removal trials and the number of removal trial carcasses during any subsequent year of fatality monitoring, subject to the approval of ODOE. The investigators must show that the reduction is justified based on a comparison of the first-year removal data with published removal data from nearby wind energy facilities.

The investigators shall use game birds or other legal sources of avian species as test carcasses for the removal trials. The investigators shall select species with the same coloration and size attributes as species found within the site boundary. If suitable trial carcasses are available, trials

during the fall season will include several small brown birds or dark colored mice to simulate bat carcasses. Legally obtained bat carcasses will be used if available.

Trial carcasses will be marked discreetly for recognition by searchers and other personnel. Carcasses will be placed in a variety of postures to simulate a range of conditions. For example, birds will be:

1. Placed in an exposed posture (e.g., thrown over the shoulder);
2. Hidden to simulate a crippled bird (e.g., placed beneath a shrub or tuft of grass); or
3. Partially hidden.

The trial carcasses will be placed randomly within the fatality monitoring search plots. Trial carcasses will be left in place until the end of the carcass persistence trial.

An approximate schedule for assessing persistence status is once daily for the first 4 days, and on days 7, 10, 14, 21, 28 and 35. This schedule may be adjusted depending on actual carcass persistence rates, weather conditions and coordination with the other survey work. The condition of scavenged carcasses will be documented during each assessment, and at the end of the trial all traces of the carcasses will be removed from the site. Scavenger or other activity could result in complete removal of all traces of a carcass in a location or distribution of feathers and carcass parts to several locations. This distribution will not constitute carcass removal if evidence of the carcass remains within an area similar in size to a search plot and if the evidence would be discernable to a searcher during a normal survey.

Before beginning carcass persistence trials for any subsequent year of fatality monitoring, the Certificate Holder shall report the results of the first year of carcass persistence trials to ODOE and ODFW. In the report, the Certificate Holder shall analyze whether four carcass persistence trials per year, as described above, provide sufficient data to accurately estimate adjustment factors for carcass removal. The number of carcass persistence trials may be adjusted up or down, subject to the approval of ODOE.

## 3.3 Searcher Efficiency Trials

The objective of searcher efficiency trials is to estimate the percentage of bird and bat fatalities that searchers are able to find. The investigators shall conduct searcher efficiency trials on the fatality monitoring search plots in both grassland/shrub-steppe and cultivated agriculture habitat types. A pooled estimate of searcher efficiency may be used—if sample sizes are too small for some habitat types—to adjust carcass counts for detection bias.

The investigators shall conduct searcher efficiency trials within each of the seasons defined in Table 1 during the years in which the fatality monitoring occurs. Each trial will involve approximately 4 to 15 carcasses. The searchers will not be notified of carcass placement or test dates. The investigators shall vary the number of trials per season and the number of carcasses per trial so that the searchers will not know the total number of trial carcasses being used in any trial. In total, approximately 80 carcasses will be used per year, or approximately 15 to 25 per season.

For each trial, the investigators shall use small- and large-bodied species. The investigators shall use game birds or other legal sources of avian species as test carcasses for the efficiency trials, and the investigators may use carcasses found in fatality monitoring searches. The investigators shall select species with the same coloration and size attributes as species found within the site boundary. If suitable test carcasses are available, trials during the fall season will include several small brown birds or dark mice to simulate bat carcasses.

Legally obtained bat carcasses will be used if available. The investigators shall mark the test carcasses to differentiate them from other carcasses that might be found within the search plot and shall use methods similar to those used to mark removal test carcasses as long as the procedure is sufficiently discreet and does not increase carcass visibility.

The Certificate Holder shall distribute trial carcasses in varied habitat in rough proportion to the habitat types within the facility site. On the day of a standardized fatality monitoring search (described below) but before the beginning of the search, investigators will place efficiency trial carcasses randomly within search plots (one to three trial carcasses per search plot) within areas to be searched. If scavengers appear attracted by placement of carcasses, the carcasses will be distributed before dawn.

Searcher efficiency trials will be spread over the entire season to incorporate effects of varying weather and vegetation growth.

The number and location of the efficiency trial carcasses found during the carcass search will be recorded. The number of efficiency trial carcasses available for detection during each trial will be determined immediately after the trial by the person responsible for distributing the carcasses. Following plot searches, all traces of test carcasses will be removed from the site. If new searchers are brought into the search team, additional searcher efficiency trials will be conducted to ensure that detection rates incorporate searcher differences. The Certificate Holder shall include a discussion of any changes in search personnel and any additional detection trials in the reporting required under Section 7.0 of this plan.

Before beginning searcher efficiency trials for any subsequent year of fatality monitoring, the Certificate Holder shall report the results of the first-year searcher efficiency trials to ODOE and ODFW. In the report, the Certificate Holder shall analyze whether the searcher efficiency trials as described above provide sufficient data to accurately estimate adjustment factors for searcher efficiency. The number of searcher efficiency trials for any subsequent year of fatality monitoring may be adjusted up or down, subject to the approval of ODOE.

## 3.4 Fatality Monitoring Search Protocol

The objective of fatality monitoring is to estimate the number of bird and bat fatalities that are attributable to facility operation as an indicator of the impact of the facility on habitat quality. The goal of bird and bat fatality monitoring is to estimate fatality rates and associated variances. The investigators shall perform fatality monitoring using standardized carcass searches according to the schedule described above.

Personnel trained in proper search techniques ("the searchers") will conduct the carcass searches by walking concentric or parallel transects (with transect width determined by the species of concern) within search plots. Search area and speed may be adjusted by habitat type after evaluation of the first searcher efficiency trial.

Searchers shall flag all avian or bat carcasses discovered. Carcasses are defined as a complete carcass or body part, 10 or more feathers or three or more primary feathers in one location. When parts of carcasses and feathers from the same species are found within a search plot, searchers shall make note of the relative positions and assess whether or not these are from the same fatality.

All carcasses (avian and bat) found during the standardized carcass searches will be photographed, recorded and labeled with a unique number. Searchers shall make note of the nearest turbine and the approximate distance from the carcass to the turbine. The species and age of the carcass will be determined when possible. Searchers shall note the extent to which the carcass is intact and estimate time since death. Searchers shall describe all evidence that might assist in determination of cause of death, such as evidence of electrocution, vehicular strike, wire strike, predation or disease. Searchers will photograph each carcass as found and will map the find on a detailed map of the search area showing the location of the wind turbines and associated facilities.

If the necessary permits have been acquired through appropriate state and federal wildlife agencies, each carcass will be bagged and frozen for future reference or (if the carcass is fresh and whole) for use in trials. A copy of the data sheet for each carcass will be kept with the carcass at all times. When assessment of the carcass is complete, all traces of it will be removed from the site. If permits are not acquired by the Certificate Holder, the carcass will be left as found.

The investigators shall calculate fatality rates using the statistical methods described in Section 3.6. If the Certificate Holder or their investigators determines that a different statistical method is more appropriate, those methods shall be reviewed and approved by ODOE. In making these calculations, the investigators may exclude carcass data from the first search (clearance survey) of each turbine plot to eliminate possible counting of carcasses that were present before the turbine was operating.

The investigators shall estimate the number of avian and bat fatalities attributable to operation of the facility based on the number of avian and bat fatalities found at the facility site. All carcasses located within areas surveyed, regardless of species, will be recorded and, if possible, a cause of death determined. If a different cause of death is not apparent, the fatality will be attributed to facility operation. The total number of avian and bat fatalities will be estimated by adjusting for removal and searcher efficiency bias.

On an annual basis, the Certificate Holder shall report an estimate of fatalities in nine categories, provided a sufficient number of detections are available to accurately determine estimates for each. The Certificate Holder shall report annual fatality rates on both a per-MW and per-turbine basis. The nine categories are:

1. All birds;
2. Small birds;

3. Large birds;
4. Raptors;
5. Raptor species of special concern;
6. Grassland species;
7. Nocturnal migrants;
8. State and federally listed threatened and endangered species and State Sensitive Species listed under OAR 635-100-0040; and
9. Bats.

## 3.5 Incidental Finds and Injured Birds

The searchers might discover carcasses incidental to formal carcass searches (incidental finds), such as when driving through the project area. For each incidental find, the searcher shall identify, photograph, record data and collect the carcass (or leave as-is) as would be done for carcasses within the formal search sample during scheduled searches. If the incidental find is located in a formal search plot within a reasonable timeframe from when that plot was officially searched (e.g., same day), the fatality data will be included in the calculation of fatality rates. If the incidental find is found outside a formal search plot, the data will be reported separately.

The Certificate Holder shall contact a qualified rehabilitation specialist approved by ODOE[2] to respond to injured wildlife. The Certificate Holder shall pay costs, if any, charged for time and expenses related to care and rehabilitation of injured native birds found on the site, unless the cause of injury is clearly demonstrated to be unrelated to the facility operations.

## 3.6 Statistical Methods for Fatality Estimates (Shoenfeld Estimator)

The estimate of the total number of wind facility-related fatalities is based on:

1. The observed number of carcasses found during standardized searches during the two monitoring years for which the cause of death is attributed to the facility.[3]
2. Searcher efficiency expressed as the proportion of planted carcasses found by searchers.
3. Removal rates expressed as the estimated average probability a carcass is expected to remain in the study area and be available for detection by the searchers during the entire survey period.

[2] Approved specialists include of Blue Mountain Wildlife, a wildlife rehabilitation center in Pendleton, and the Audubon Bird Care Center in Portland. The Certificate Holder must obtain ODOE approval before using other specialists.
[3] If a different cause of death is not apparent, the fatality will be attributed to facility operation.

### 3.6.1 Definition of Variables

The following variables are used in the equations below:

- $c_i$ the number of carcasses detected at plot i for the study period of interest (e.g., one year) for which the cause of death is either unknown or is attributed to the facility
- $n$ the number of search plots
- $k$ the number of turbines searched (includes the turbines centered within each search plot and a proportion of the number of turbines adjacent to search plots to account for the effect of adjacent turbines on the search plot buffer area)
- $\bar{c}$ the average number of carcasses observed per turbine per year
- $s$ the number of carcasses used in removal trials
- $s_c$ the number of carcasses in removal trials that remain in the study area after 35 days
- $se$ standard error (square of the sample variance of the mean)
- $t_i$ the time (days) a carcass remains in the study area before it is removed
- $\bar{t}$ the average time (days) a carcass remains in the study area before it is removed
- $d$ the total number of carcasses placed in searcher efficiency trials
- $p$ the estimated proportion of detectable carcasses found by searchers
- $I$ the average interval between searches in days
- $\hat{\pi}$ the estimated probability that a carcass is both available to be found during a search and is found
- $m_t$ the estimated annual average number of fatalities per turbine per year, adjusted for removal and observer detection bias
- C nameplate energy output of turbine in megawatts (MW)

### 3.6.2 Observed Number of Carcasses

The estimated average number of carcasses ($\bar{c}$) observed per turbine per year is:

$$\bar{c} = \frac{\sum_{i=1}^{n} c_i}{k}$$

### 3.6.3 Estimation of Carcass Removal

Estimates of carcass removal are used to adjust carcass counts for removal bias. Mean carcass removal time ($\bar{t}$) is the average length of time a carcass remains at the site before it is removed:

$$\bar{t} = \frac{\sum_{i=1}^{n} t_i}{s - s_c}$$

This estimator is the maximum likelihood estimator assuming the removal times follow an exponential distribution and there is right-censoring of data. Any trial carcasses still remaining at 35 days are collected, yielding censored observations at 35 days. If all trial carcasses are removed before the end of the trial, then $s_c$ is 0, and $\bar{t}$ is just the arithmetic average of the removal times. Removal rates will be estimated by carcass size (small and large), habitat type and season.

### *3.6.4 Estimation of Observer Detection Rates*

Observer detection rates (i.e., searcher efficiency rates) are expressed as $p$, the proportion of trial carcasses that are detected by searchers. Observer detection rates will be estimated by carcass size, habitat type and season.

### *3.6.5 Estimation of Facility-Related Fatality Rates*

The estimated per turbine annual fatality rate ($m_t$) is calculated by:

$$m_t = \frac{\bar{c}}{\hat{\pi}}$$

Where $\hat{\pi}$ includes adjustments for both carcass removal (from scavenging and other means) and observer detection bias assuming that the carcass removal times $t_i$ follow an exponential distribution. Under these assumptions, this detection probability is estimated by:

$$\hat{\pi} = \frac{\bar{t} \cdot p}{I} \cdot \left[ \frac{\exp\left(I/\bar{t}\right) - 1}{\exp\left(I/\bar{t}\right) - 1 + p} \right]$$

The estimated per MW annual fatality rate (m) is calculated by:

$$m = \frac{m_t}{C}$$

The final reported estimates of $m$ associated standard errors and 90% confidence intervals will be calculated using bootstrapping (Manly 1997). Bootstrapping is a computer simulation technique that is useful for calculating point estimates, variances and confidence intervals for complicated test statistics. For each iteration of the bootstrap, the plots will be sampled with replacement, trial carcasses will be sampled with replacement, and $\bar{c}, \bar{t}, p, \hat{\pi}$ˆ and $m$ will be calculated. A total of 5,000 bootstrap iterations will be used. The reported estimates will be the means of the 5,000 bootstrap estimates. The standard deviation of the bootstrap estimates is the estimated standard error. The lower 5th and upper 95th percentiles of the 5000 bootstrap estimates are estimates of the lower limit and upper limit of 90% confidence intervals.

## 3.7 Mitigation

The Certificate Holder shall use best available science to resolve any uncertainty in the fatality monitoring results and to determine whether the data indicate that additional mitigation should be considered. ODOE may require additional, targeted monitoring if the data indicate the potential for significant impacts that cannot be addressed by worst-case analysis and appropriate mitigation.

Mitigation may be appropriate if fatality rates exceed a "threshold of concern."[4] For the purpose of determining whether a threshold has been exceeded, the Certificate Holder shall calculate the average annual fatality rates for species groups after each year of monitoring, provided a sufficient number of detections are available to accurately determine estimates for these groups. Based on current knowledge of the species that are likely to use the habitat in the area of the facility, the thresholds shown in Table 2 apply to the Facility.

**Table 2. Fatality Thresholds of Concern by Species Group**

| Species Group | Threshold of Concern (Fatalities per MW) |
|---|---|
| Raptors<br>(All eagles, hawks, falcons and owls, including burrowing owls.) | 0.09 |
| Raptor species of special concern<br>(Swainson's hawk, ferruginous hawk, peregrine falcon, golden eagle, bald eagle, burrowing owl.) | 0.06 |
| Grassland species<br>(All native bird species that rely on grassland habitat and are either resident species occurring year round or species that nest in the area, excluding horned lark, burrowing owl and northern harrier.) | 0.59 |
| State sensitive avian species listed under OAR 635-100-0040 (Excluding raptors listed above.) | 0.2 |
| Bat species as a group | 2.5 |

If the data show that a threshold of concern for an avian species group has been exceeded, the Certificate Holder shall implement mitigation if ODOE determines that mitigation is appropriate based on analysis of the data, consultation with ODFW, and consideration of any other significant information available at the time. In addition, ODOE may determine that mitigation is appropriate if fatality rates for individual avian or bat species (especially State Sensitive Species) are higher than expected and at a level of biological concern. If ODOE determines that mitigation is appropriate, the Certificate Holder, in consultation with ODOE and ODFW, shall propose mitigation measures designed to benefit the affected species. Acceptable mitigation may include, but is not limited to, contributions to wildlife rehabilitators, funding of research by third parties on local raptor

[4] The Council adopted "thresholds of concern" for raptors, grassland species, and state sensitive avian species in the Final Order on the Application for the Klondike III Wind Project (June 30, 2006) and for bats in the Final Order on the Application for the Biglow Canyon Wind Farm (June 30, 2006). As explained in the Klondike III order: "Although the threshold numbers provide a rough measure for deciding whether the Council should be concerned about observed fatality rates, the thresholds have a very limited scientific basis. The exceeding of a threshold, by itself, would not be a scientific indicator that operation of the facility would result in range-wide population level declines of any of the species affected. The thresholds are provided in the Wildlife Monitoring and Mitigation Plan to guide consideration of additional mitigation based on two years of monitoring data."

populations, or habitat mitigation. This may take into consideration whether the mitigation required or provided in conjunction with raptor nest monitoring, habitat mitigation, or other components of the Wildlife Monitoring and Mitigation Plan or Habitat Mitigation Plan, would also benefit the affected species.

The Certificate Holder shall implement mitigation as approved by ODOE, subject to review by EFSC. ODOE may recommend additional, targeted data collection if the need for mitigation is unclear based on the information available at the time. The Certificate Holder shall implement such data collection as approved by EFSC.

The Certificate Holder shall design mitigation to benefit the affected species group. Mitigation may include, but is not limited to, protection of nesting habitat for the affected group of native species through a conservation easement or similar agreement. Tracts of land that are intact and functional for wildlife are preferable to degraded habitat areas. Preference should be given to protection of land that would otherwise be subject to development or use that would diminish the wildlife value of the land. In addition, mitigation measures might include: enhancement of the protected tract by weed removal and control; increasing the diversity of native grasses and forbs; planting sagebrush or other shrubs; constructing and maintaining artificial nest structures for raptors; improving wildfire response; and conducting or making a contribution to research that will aid in understanding more about the affected species and its conservation needs in the region.

If the data show that the threshold of concern for bat species as a group has been exceeded, the Certificate Holder shall implement mitigation if ODOE determines that mitigation is appropriate based on analysis of the data, consultation with ODFW, and consideration of any other significant information available at the time. For example, if the threshold for bat species as a group is exceeded, the Certificate Holder may contribute to Bat Conservation International or to a Pacific Northwest bat conservation group to fund new or ongoing research in the Pacific Northwest to better understand wind facility impacts to bat species and to develop possible ways to reduce impacts to the affected species.

# 4.0 Raptor Nest Surveys

The objectives of raptor nest surveys are: (1) count raptor nests on the ground or aboveground in trees or other aboveground nest locations in the vicinity of the facility; and (2) to determine whether there are noticeable changes in nesting activity or nesting success in the local populations of the following raptor species: Swainson's hawk (*Buteo swainsoni*), golden eagle (*Aquila chrysaetos*), and ferruginous hawk (*Buteo regalis*).

The Certificate Holder shall conduct short-term and long-term monitoring. The investigators will use aerial and ground surveys to evaluate nest success by gathering data on active nests, on nests with young, and on young fledged. The Certificate Holder shall hire independent third-party investigators to perform raptor nest surveys.

## 4.1 Short-Term Monitoring

Short-term monitoring will be done in two monitoring seasons. The first monitoring season will be in the first raptor nesting season after completion of construction of the facility. The second monitoring season will be in the fourth year after construction is completed. The Certificate Holder shall provide a summary of the first-year results in the monitoring report described in Section 6.0. After the second monitoring season, the investigators will analyze two years of data compared to the baseline data.

During each monitoring season, the investigators will conduct a minimum of one aerial and one ground survey for raptor nests in late May or early June and additional surveys as described in this section. The survey area is the area within the facility site and a 2-mile buffer zone around the site. For the ground surveys while checking for nesting success (conducted within the facility site and up to a maximum of ½ mile from the facility site), nests outside the leased project boundary will be checked from an appropriate distance where feasible, depending on permission from the landowner for access.

All nests discovered during pre-construction surveys and any nests discovered during post-construction surveys, whether active or inactive, will be given identification numbers. Global positioning system (GPS) coordinates will be recorded for each nest. Locations of inactive nests will be recorded because they could become occupied during future years.

Determining nest occupancy may require one or two visits to each nest. Aerial surveys for nest occupancy will be conducted within the facility site and a 2-mile buffer. For occupied nests, the Certificate Holder will determine nesting success by a minimum of one ground visit to determine the species, number of young and young fledged within the facility site and up to 0.5 miles from the facility site. “Nesting success” means that the young have successfully fledged (the young are independent of the core nest site).

## 4.2 Long-Term Monitoring

In addition to the two years of post-construction short-term raptor nest surveys described in Section 4.1, the investigators shall conduct long-term raptor nest surveys at 5-year intervals for the life of the facility.[5] Investigators will conduct the first long-term raptor nest survey in the raptor nesting season of the ninth year after construction is completed and will repeat the survey at 5-year intervals thereafter. In conducting long-term surveys, the investigators will follow the same survey protocols as described in Section 4.1 unless the investigators propose alternative protocols that are approved by ODOE. In developing an alternative protocol, the investigators will consult with ODFW and will take into consideration other raptor nest monitoring conducted in adjacent areas. The investigators will analyze the data—as a way of determining trends in the number of raptor breeding attempts the facility supports and the success of those attempts—and will submit a report after each year of long-term raptor nest surveys.

[5] As used in this plan, “life of the facility” means continuously until the facility site is restored and the site certificate is terminated in accordance with OAR 345-027-0110.

# 5.0 Wildlife Response and Reporting System

The Certificate Holder has voluntarily developed a Wildlife Response and Reporting System (WRRS) as a proactive method of monitoring and recording birds and bats that are impacted by turbines at its facilities. This system has a specific set of processes, procedures, and training for monitoring, responding to, and reporting bird and bat injuries and fatalities at wind turbines that are tailored to each facility. The Certificate Holder has developed a WRRS Manual, which gives details of the program, and will be the manual by which operations personnel the WRRS program. The manual's purpose is to standardize the actions in response to any wildlife fatalities and/or injuries found within the Certificate Holder's facilities, regardless of their cause. The main points of the system are as follows:

- Any livestock or wildlife injury or fatality discovered within the facility boundaries will be reported immediately to the on-duty Site Supervisor.
- The lead or supervisor shall complete an incident report and take photographs.
- Wind Fleet Wildlife Program Manager shall be notified, and further actions will be determined at that time based on the species and circumstances surrounding the incident.
- If an endangered or threatened species is found dead or injured at the site, the Certificate Holder will immediately notify the USFWS-Region 1 Field Office of the discovery.

# 6.0 Washington Ground Squirrel Monitoring

In compliance with the pre-construction condition PRE-TE-02, Washington ground squirrel (*Urocitellus washingtoni*) pre-construction surveys were performed to determine operations monitoring requirements. No Washington ground squirrel colonies were identified during pre-construction surveys; therefore, no monitoring is planned at this time. However, if new colonies are located during other monitoring activities or incidentally during operations, the Certificate Holder shall document and delineate the colonies, and shall amend the WMMP with a Washington ground squirrel monitoring program in consultation with ODOE.

# 7.0 Data Reporting

The Certificate Holder will report wildlife monitoring data and analysis to ODOE for each calendar year in which wildlife monitoring occurs. Monitoring data include fatality monitoring program data, raptor nest survey data, and WRHS data. The Certificate Holder may include the reporting of wildlife monitoring data and analysis in the annual report required under OAR 345-026-0080 or submit this information as a separate document at the same time the annual report is submitted. In addition, the Certificate Holder shall provide to ODOE any data or record generated in carrying out this monitoring plan upon request by ODOE.

The Certificate Holder shall notify USFWS and ODFW if any federal or state endangered or threatened species are killed or injured on the facility site within 24 hours of species identification.

# 8.0 Amendment of the Plan

This WMMP may be amended from time to time by agreement of the Certificate Holder and EFSC. Such amendments may be made without amendment of the site certificate. EFSC authorizes ODOE to agree to amendments to this plan and to mitigation actions that may be required under this plan. ODOE shall notify EFSC of all amendments and mitigation actions, and EFSC retains the authority to approve, reject or modify any amendment of this plan or mitigation action agreed to by ODOE.

# 9.0 References

EFSC (Energy Facility Siting Council). 2017a. Site Certificate for the Wheatridge Wind Energy Facility. Issued April 28, 2017.

EFSC. 2017b. First Amended Site Certificate for the Wheatridge Wind Energy Facility. Issued July 27, 2017.

EFSC. 2018a. Second Amended Site Certificate for the Wheatridge Wind Energy Facility. Issued, November 16, 2018.

EFSC. 2018b. Third Amended Site Certificate for the Wheatridge Wind Energy Facility. Issued December 14, 2018.

EFSC. 2019. Fourth Amended Site Certificate for the Wheatridge Wind Energy Facility. Issued November 22, 2019.

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# Attachment 7. Articles of Incorporation

# Delaware

The First State



*I, JEFFREY W. BULLOCK, SECRETARY OF STATE OF THE STATE OF DELAWARE, DO HEREBY CERTIFY THE ATTACHED IS A TRUE AND CORRECT COPY OF THE CERTIFICATE OF FORMATION OF "WHEATRIDGE WIND II, LLC", FILED IN THIS OFFICE ON THE FOURTH DAY OF DECEMBER, A.D. 2018, AT 2:40 O`CLOCK P.M.*

Jeffrey W. Bullock, Secretary of State

7178638 8100
SR# 20187952955

Authentication: 204024174
Date: 12-04-18

You may verify this certificate online at corp.delaware.gov/authver.shtml

State of Delaware
Secretary of State
Division of Corporations
Delivered 02:40 PM 12/04/2018
FILED 02:40 PM 12/04/2018
SR 20187952955 - File Number 7178638

# *STATE OF DELAWARE*

## *LIMITED LIABILITY COMPANY CERTIFICATE OF FORMATION OF*

## WHEATRIDGE WIND II, LLC

The undersigned, an authorized natural person, for the purpose of forming a limited liability company under the provisions and subject to the requirements of the laws of the State of Delaware (including Chapter 18, Title 6 of the Delaware Code and the acts amendatory thereof and supplemental thereto, and known, identified, and referred to as the "Delaware Limited Liability Company Act"), hereby certifies that:

**FIRST:** The name of the limited liability company (hereinafter called the "limited liability company") is **Wheatridge Wind II, LLC.**

**SECOND:** The address of the registered office and the name and address of the registered agent of the limited liability company required to be maintained by Section 18-104 of the Delaware Limited Liability Company Act are:

NextEra Registered Agency, LLC
1105 N. Market Street, Suite 1300
Wilmington, Delaware 19801

Executed this 4th day of December, 2018.

Amy Lowe

By: Amy A. Lowe
An Authorized Person

***STATE OF DELAWARE***

***LIMITED LIABILITY COMPANY***
***CERTIFICATE OF FORMATION***
***OF***

**WHEATRIDGE WIND II, LLC**

The undersigned, an authorized natural person, for the purpose of forming a limited liability company under the provisions and subject to the requirements of the laws of the State of Delaware (including Chapter 18, Title 6 of the Delaware Code and the acts amendatory thereof and supplemental thereto, and known, identified, and referred to as the "Delaware Limited Liability Company Act"), hereby certifies that:

**FIRST:** The name of the limited liability company (hereinafter called the "limited liability company") is **Wheatridge Wind II, LLC.**

**SECOND:** The address of the registered office and the name and address of the registered agent of the limited liability company required to be maintained by Section 18-104 of the Delaware Limited Liability Company Act are:

NextEra Registered Agency, LLC
1105 N. Market Street, Suite 1300
Wilmington, Delaware 19801

Executed this 4th day of December, 2018.

By: Amy A. Lowe
An Authorized Person

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# Attachment 8. Proof of Registration to Do Business in Oregon

Secretary of State
Corporation Division
255 Capitol Street NE, Suite 151
Salem, OR 97310-1327

Phone:(503)986-2200
www.filinginoregon.com

**Registry Number:** 1502750-98
**Type:** FOREIGN LIMITED LIABILITY COMPANY

**Next Renewal Date:** 12/10/2019

WHEATRIDGE WIND II, LLC
700 UNIVERSE BLVD
JUNO BEACH FL 33408

## Acknowledgment Letter

The document you submitted was recorded as shown below. Please review and verify the information listed for accuracy.

**Document**
APPLICATION FOR AUTHORITY

**Filed On**
12/10/2018

**Jurisdiction**
DELAWARE

**Name**
WHEATRIDGE WIND II, LLC

**Principal Place of Business**
700 UNIVERSE BLVD
JUNO BEACH FL 33408

**Registered Agent**
CORPORATION SERVICE COMPANY
1127 BROADWAY ST NE STE 310
SALEM OR 97301

**Mailing Address**
700 UNIVERSE BLVD
JUNO BEACH FL 33408

ANNTEM
ACK
12/10/2018

# Application for Authority to Transact Business - Foreign Limited Liability Company

Secretary of State - Corporation Division - 255 Capitol St. NE, Suite 151 - Salem, OR 97310-1327 – sos.oregon.gov/business - Phone: (503) 986-2200

FILED
DEC 10 2018
OREGON
SECRETARY OF STATE

**REGISTRY NUMBER:** 152275096
For office use only

In accordance with Oregon Revised Statute 192.410-192.490, the information on this application is public record. We must release this information to all parties upon request and it will be posted on our website. For office use only

Please Type or Print Legibly in **Black** Ink. Attach Additional Sheet if Necessary.

1) **NAME:** Wheatridge Wind II, LLC

**NOTE:** (Must contain the words "Limited Liability Company" or the abbreviations "LLC" or "L.L.C.") Must be identical to the name of record in home jurisdiction.

2) **REGISTRY NUMBER IN HOME JURISDICTION** 7178638

**OR:** **CERTIFICATE OF EXISTENCE** ☐ **(ATTACHED)**

(Please provide a web-verifiable registry number from the entity's home jurisdiction. Certain states, such as Delaware and New Jersey, do not provide status information online. Entities from such places must instead attach an official certificate of existence, current within 60 days of delivery to this office.)

3) **DATE OF ORGANIZATION:** 12/04/2018

**DURATION, IF NOT PERPETUAL:**

4) **STATE OR COUNTRY OF ORGANIZATION:** Delaware

5) **THIS FOREIGN LIMITED LIABILITY COMPANY SATISFIES THE REQUIREMENTS OF ORS 63.714(3).**

6) **NAME OF OREGON REGISTERED AGENT:** Corporation Service Company

7) **REGISTERED AGENT'S PUBLICLY AVAILABLE ADDRESS:**
(Must be an **Oregon Street Address**, which is identical to the registered agent's business office.)
1127 Broadway Street NE, Suite 310
Salem, OR 97301

8) **ADDRESS OF PRINCIPAL OFFICE OF THE BUSINESS:**
700 Universe Blvd.
Juno Beach, FL 33408

9) **ADDRESS WHERE THE DIVISION MAY MAIL NOTICES:**
700 Universe Blvd.
Juno Beach, FL 33408

10) **HOW WILL THIS LIMITED LIABILITY COMPANY BE MANAGED?**

☒ This LLC will be member-managed by one or more members.
☐ This LLC will be manager-managed by one or more managers.

11) **EXECUTION:** (At least one member or manager must sign.)
I declare as an authorized signer, under penalty of perjury, that this document does not fraudulently conceal, fraudulently obscure, fraudulently alter or otherwise misrepresent the identity of the person or any members, managers, employees or agents of the limited liability company. This filing has been examined by me and is, to the best of my knowledge and belief true, correct, and complete. Making false statements in this document is against the law and may be penalized by fines, imprisonment or both.

| Signature: | Printed Name: | Title: |
|---|---|---|
| Melissa A. Plotsky | Melissa A. Plotsky | Secretary |

**CONTACT NAME:** (To resolve questions with this filing.)
Angela Ewers

**PHONE NUMBER:** (Include area code.)
561/304-5923

**FEES**
Required Processing Fee $275
Processing Fees are nonrefundable. Please make check payable to "Corporation Division."
Free copies are available at sos.oregon.gov/business, using the Business Name Search program.

# Delaware

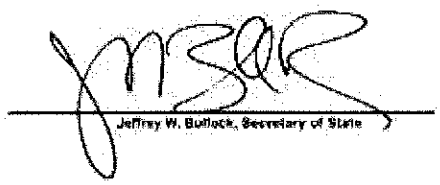
The First State



*I, JEFFREY W. BULLOCK, SECRETARY OF STATE OF THE STATE OF DELAWARE, DO HEREBY CERTIFY "WHEATRIDGE WIND II, LLC" IS DULY FORMED UNDER THE LAWS OF THE STATE OF DELAWARE AND IS IN GOOD STANDING AND HAS A LEGAL EXISTENCE SO FAR AS THE RECORDS OF THIS OFFICE SHOW, AS OF THE SEVENTH DAY OF DECEMBER, A.D. 2018.*

*AND I DO HEREBY FURTHER CERTIFY THAT THE SAID "WHEATRIDGE WIND II, LLC" WAS FORMED ON THE FOURTH DAY OF DECEMBER, A.D. 2018.*

*AND I DO HEREBY FURTHER CERTIFY THAT THE ANNUAL TAXES HAVE BEEN ASSESSED TO DATE.*


7178638 8300

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Authentication: 204049208

Date: 12-07-18

You may verify this certificate online at corp.delaware.gov/authver.shtml

## Business Name Search

ter Friendly

### Business Entity Data

| Entity Type | Entity Status | Jurisdiction | Registry Date | Next Renewal Date |
|---|---|---|---|---|
| FLLC | ACT | DELAWARE | 12-10-2018 | 12-10-2020 |

ATRIDGE WIND II, LLC

ter Friendly

### Associated Names

CIPAL PLACE OF BUSINESS

VD

| | | | | | |
|---|---|---|---|---|---|
| | FL | 33408 | | Country | UNITED STATES OF AMERICA |

*gistered agents and service of process.*

STERED AGENT — Start Date: 12-10-2018 — Resign Dat

CORPORATION SERVICE COMPANY

ST NE STE 310

| | | | | | |
|---|---|---|---|---|---|
| | OR | 97301 | | Country | UNITED STATES OF AMERICA |

LING ADDRESS

VD

| | | | | | |
|---|---|---|---|---|---|
| | FL | 33408 | | Country | UNITED STATES OF AMERICA |

BER — Resign Dat

ND HOLDINGS, LLC

VD

| | | | | | |
|---|---|---|---|---|---|
| | FL | 33408 | | Country | UNITED STATES OF AMERICA |

ter Friendly

### Name History

| Business Entity Name | Name Type | Name Status | Start Date |
|---|---|---|---|
| | EN | CUR | 12-10-2018 |

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# Attachment 9. Property Owner List (Submitted under Separate Cover)

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# Attachment 10. Opinion of Legal Counsel

SQUIRE PATTON BOGGS

Squire Patton Boggs (US) LLP
200 South Biscayne Boulevard, Suite 4700
Miami, Florida 33131

O +1 305 577 7000
F +1 305 577 7001
Squirepattonboggs.com

March 26, 2020

Ms. Sarah Esterson, Siting Analyst
Oregon Department of Energy
500 Capitol Street NE, 1st Floor
Salem, OR 97301

**Re: Wheatridge Wind II, LLC**

Dear Ms. Esterson:

This firm has acted as special counsel to Wheatridge Wind II, LLC, a Delaware limited liability company (the "Certificate Holder") in connection with the Site Certification for the Wheatridge Wind Energy Facility and the Certificate Holder's development, construction, operation and retirement of the wind farm located in Morrow and Umatilla Counties, Oregon (the "**Wheatridge Project**").

For purposes of the opinions expressed in this letter, we have examined a certified copy of the Certificate of Formation of Wheatridge Wind II, LLC, filed with the State of Delaware Secretary of State, Division of Corporations on December 4, 2018 (the "**COF**"), and a copy of the Limited Liability Company Agreement of Wheatridge Wind II, LLC, dated as of December 6, 2018, and made effective as of December 4, 2018, executed by Wheatridge Wind Holdings, LLC, as Sole Member (the "**LLC Agreement**", and together with the COF, the "**Documents**").

We have reviewed only the Documents and have made no other investigation or inquiry. Without limiting the generality of the foregoing, we have not examined or reviewed any document or instrument (other than the Documents), including, without limitation, any document or instrument referred to in the Documents. We have also relied, without additional investigation, upon the facts and representations set forth in the Documents.

In our examination of the Documents and in rendering the following opinion, in addition to the assumptions contained elsewhere in this letter, we have, with your consent, assumed without investigation (and we express no opinion regarding the following):

(a) that the Documents are valid and binding obligations of each party thereto, enforceable against such party in accordance with its respective terms;

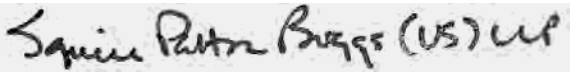
(b) We have assumed that the provisions of the LLC Agreement relating to the powers of, and authorization and execution of documents and agreements by the Certificate Holder would be enforced by Delaware law as written.

Based solely upon our examination and consideration of the Documents, and in reliance thereon, and in reliance upon the factual statements and representations contained in the Documents, and our consideration of such matters of law as we have considered necessary or appropriate for the expression of the opinion contained herein, and subject to the exceptions, limitations, qualifications and assumptions expressed herein, we are of the opinion that, subject to the Certificate Holder's meeting all of the requirements of any applicable federal, state and local laws (including all rules and regulations promulgated thereunder), the Certificate Holder has the legal authority to construct and operate the Wheatridge Project without violating the Documents.

The opinion expressed herein is limited solely to the scope of our opinion is based solely on the Limited Liability Company Act of the State of Delaware.

Please do not hesitate to contact me if you have any questions regarding this matter.

Very truly yours,



SQUIRE PATTON BOGGS (US) LLP

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