

**BEFORE THE  
ENERGY FACILITY SITING COUNCIL  
OF THE STATE OF OREGON**

In the Matter of Request for Amendment 4 for the  
Wheatridge Wind Energy Facility

---

)  
) FINAL ORDER ON  
) REQUEST FOR AMENDMENT 4 TO  
) THE SITE CERTIFICATE

November 22, 2019

## TABLE OF CONTENTS

<b>I. INTRODUCTION .....</b>	<b>1</b>
<b>I.A. CERTIFICATE HOLDER CONTACT INFORMATION .....</b>	<b>1</b>
<b>I.B. DESCRIPTION OF THE APPROVED FACILITY .....</b>	<b>2</b>
<b>I.C. DESCRIPTION OF APPROVED FACILITY SITE LOCATION .....</b>	<b>2</b>
<b>I.D. PROCEDURAL HISTORY.....</b>	<b>4</b>
<b>II. AMENDMENT PROCESS .....</b>	<b>5</b>
<b>II.A. REQUESTED AMENDMENT .....</b>	<b>5</b>
<b>II.B. AMENDMENT REVIEW PROCESS .....</b>	<b>9</b>
<b>II.C. COUNCIL REVIEW PROCESS.....</b>	<b>10</b>
<b>II.D. APPLICABLE DIVISION 27 RULE REQUIREMENTS .....</b>	<b>14</b>
<b>III. REVIEW OF THE REQUESTED AMENDMENT .....</b>	<b>15</b>
<b>III.A. GENERAL STANDARD OF REVIEW: OAR 345-022-0000 .....</b>	<b>16</b>
<b>III.B. ORGANIZATIONAL EXPERTISE: OAR 345-022-0010.....</b>	<b>19</b>
<b>III.C. STRUCTURAL STANDARD: OAR 345-022-0020 .....</b>	<b>24</b>
<b>III.D. SOIL PROTECTION: OAR 345-022-0022.....</b>	<b>29</b>
<b>III.E. LAND USE: OAR 345-022-0030.....</b>	<b>30</b>
III.E.I. Local Applicable Substantive Criteria.....	32
III.E.II. Directly Applicable State Rules .....	49
III.E.III. ORS 215.274 Applicability Evaluation .....	60
III.E.IV. Goal 3 Exception .....	61
<b>III.F. PROTECTED AREAS: OAR 345-022-0040 .....</b>	<b>67</b>
<b>III.G. RETIREMENT AND FINANCIAL ASSURANCE: OAR 345-022-0050.....</b>	<b>76</b>
<b>III.H. FISH AND WILDLIFE HABITAT: OAR 345-022-0060.....</b>	<b>83</b>
<b>III.I. THREATENED AND ENDANGERED SPECIES: OAR 345-022-0070 .....</b>	<b>94</b>
<b>III.J. SCENIC RESOURCES: OAR 345-022-0080 .....</b>	<b>99</b>
<b>III.K. HISTORIC, CULTURAL, AND ARCHAEOLOGICAL RESOURCES: OAR 345-022-0090 .....</b>	<b>102</b>
<b>III.L. RECREATION: OAR 345-022-0100 .....</b>	<b>107</b>
<b>III.M. PUBLIC SERVICES: OAR 345-022-0110 .....</b>	<b>114</b>
<b>III.N. WASTE MINIMIZATION: OAR 345-022-0120.....</b>	<b>124</b>
<b>III.O. DIVISION 23 STANDARDS .....</b>	<b>126</b>
<b>III.P. DIVISION 24 STANDARDS.....</b>	<b>126</b>
III.P.1. Siting Standards for Transmission Lines: OAR 345-024-0090.....	127
<b>III.Q. OTHER APPLICABLE REGULATORY REQUIREMENTS UNDER COUNCIL JURISDICTION .....</b>	<b>133</b>
III.Q.1. Noise Control Regulations: OAR 340-035-0035 .....	133
III.Q.2. Removal-Fill .....	139
III.Q.3. Water Rights.....	141
<b>IV. CONCLUSIONS AND ORDER .....</b>	<b>143</b>



## LIST OF TABLES

Table 1: Morrow County Applicable Substantive Criteria .....	33
Table 2: Soil Types and NRCS Classification within Amended Site Boundary Area .....	55
Table 3: Protected Areas within Facility Analysis Area and Distance from Amended Site Boundary .....	69
Table 4: Proposed RFA4 Decommissioning and Site Restoration Cost Estimate .....	79
Table 5: Estimated Temporary and Permanent Habitat Impacts, by Category, for Facility, with Proposed Changes.....	87
Table 6: Important Scenic Resources Inventory .....	100
Table 7: Calculated Electric Field and Magnetic Field Values for 34.5-kV Collector Lines .....	129
Table 8: Statistical Noise Limits for Industrial and Commercial Noise Sources .....	136

## LIST OF FIGURES

Figure 1: Facility Location .....	3
Figure 2: Proposed Amended Site Boundary and Solar Array/Distributed Energy Storage Locations .....	7
Figure 3: Proposed Habitat Mitigation Area Location .....	89
Figure 4: Viewshed Impacts of Proposed RFA4 Facility Components .....	112

## ATTACHMENTS

- Attachment A: Amended Site Certificate
- Attachment B: Reviewing Agency Comments on preliminary Request for Amendment 4
- Attachment C: Draft Proposed Order Comments/Index
- Attachment D: Draft Habitat Mitigation Plan
- Attachment E: Draft Amended Revegetation Plan
- Attachment F: Draft Noxious Weed Control Plan
- Attachment G: Wildlife Monitoring and Mitigation Plan

## **I. INTRODUCTION**

The Energy Facility Siting Council (Council or EFSC) issues this final order, in accordance with Oregon Revised Statute (ORS) 469.405(1) and Oregon Administrative Rule (OAR) 345-027-0371, based on its review of Request for Amendment 4 (amendment request or RFA4) to the Wheatridge Wind Energy Facility site certificate. This final order considers oral comments made at the August 22, 2019 public hearing, written comments received before the close of the record of the public hearing, agency consultation, and comments received from the Council following its review of the draft proposed order at the September 27, 2019 Council meeting. The certificate holder is Wheatridge Wind Energy, LLC, (hereinafter referred to as "Wheatridge" or certificate holder) which is a wholly owned subsidiary of NextEra Energy Resources, LLC.

In this final order, the Council grants approval of the following facility changes:

- Addition of 1,527 acres to the site boundary, increasing total site boundary area from 13,097 to 14,624 acres;
- Construction and operation of 150 megawatts (MW) of photovoltaic solar energy generation equipment including one or more solar arrays consisting of photovoltaic panels mounted onto tracking modules and arranged in strings within solar microsites areas. Strings of modules would be connected by electrical collector lines and inverters that would convert the direct current power to alternating current power. Power generated from proposed solar arrays would be transmitted to the Wheatridge West collector substation via 34.5 kV collector lines;
- Construction and operation of up to 41 distributed energy storage systems and sites;
- Modification of Wheatridge West collector substation for interconnection of electrical equipment, increasing permanent disturbance from 5 to 10 acres;
- Amend site certificate conditions: Condition GEN-LU-03; PRE-LU-08; CON-FW-01; AND CON-FW-02.

Based upon review of this amendment request, in conjunction with comments received from members of the public, the certificate holder and recommendations received from state agencies and tribal and local government entities, the Council approves and grant a fourth amendment to the Wheatridge Wind Energy Facility site certificate subject to the existing and new and amended conditions set forth in this final order.

### **I.A. Certificate Holder Contact Information**

#### ***Name and Address of Certificate Holder***

Wheatridge Wind Energy, LLC

700 Universe Boulevard  
Juno Beach, Florida 33408

***Parent Company of the Certificate Holder***

NextEra Energy Resources, LLC  
FEW/JB

700 Universe Boulevard  
Juno Beach, Florida 33408

***Certificate Holder Contact***

Jesse Marshall  
Wheatridge Wind Energy, LLC  
700 Universe Boulevard  
Juno Beach, Florida 33408

**I.B. Description of the Approved Facility**

The Wheatridge Wind Energy Facility (facility) site certificate, effective May 24, 2017, authorizes construction and operation of a 500 megawatt (MW) wind facility, to be located within both Morrow and Umatilla counties. The facility has not been constructed but, as approved, would include up to 292 wind turbines. The wind turbines could include a range of technologies with varying dimensions. Wind turbine dimensions may not exceed 476 feet in maximum blade tip height (tower hub height plus blade length); 197 feet in maximum blade length; 278 feet in maximum hub height; and 393 feet in rotor diameter. The individual wind turbine generating capacity may not exceed 2.5 MW.

Related or supporting facilities to the energy facility, as approved, would include up to 32 miles of up to two parallel overhead 230 kilovolt (kV) intraconnection transmission lines that would traverse one of four approved routing options, as further described below. Related or supporting facilities, as approved, would also include an electrical collection system, up to two collector substations, up to 12 meteorological towers, supervisory control and data acquisition (SCADA) systems, up to two operations and maintenance (O&M) buildings, up to two battery storage systems (20 and 30 MW, each) up to 72 miles of new or improved access roads, and temporary construction areas.

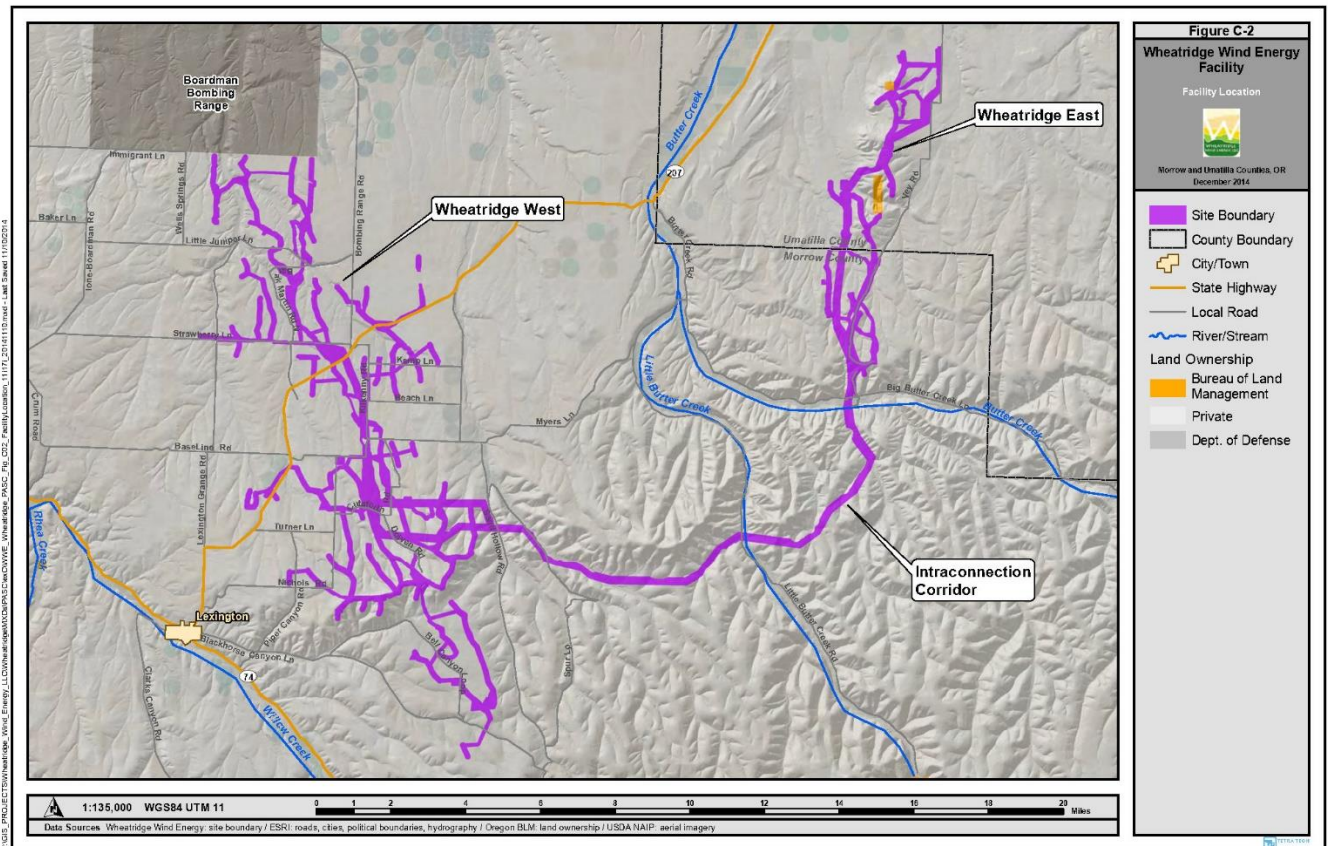
**I.C. Description of Approved Facility Site Location**

***Site Boundary***

The facility site boundary includes approximately 13,097 acres of private land, within Morrow and Umatilla counties, and includes the perimeter of the energy facility site, all temporary laydown, staging areas and intraconnection transmission corridors.

The energy facility site 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 would be connected via a 230 kV transmission line or “intraconnection” transmission line (see Figure 1, *Facility Location* below).

**Figure 1: Facility Location**



### Micrositing Corridor

Micrositing corridor means a continuous area of land within which construction of facility components may occur subject to site specific conditions.<sup>1</sup> Council authorizes micrositing corridors for wind facilities when a certificate holder has adequately studied the entire corridor

<sup>1</sup> OAR 345-001-0010(32)

1 and demonstrated compliance with Council standards based on impacts of facility components  
2 anywhere within the corridor.

3  
4 The Council approved a micrositing corridor for this facility which is a minimum of  
5 approximately 660 feet in width around wind turbines. The micrositing corridor width around  
6 site access roads and electrical collection lines (collector lines) is narrower, between 200 and  
7 500 feet in width. The micrositing corridor is wider for the area surrounding the substations,  
8 meteorological towers (met towers), O&M buildings, and construction yards.

#### 9 10 *Intraconnection Transmission Line Corridor*

11  
12 The certificate holder obtained approval of four routing options for the 230 kV intraconnection  
13 transmission line that interconnects Wheatridge West and Wheatridge East for the  
14 transmission of generated power. The intraconnection transmission line corridor is  
15 approximately 1,000-feet in width and ranges in length from 24.5 to 31.5 miles, based upon the  
16 four approved transmission line route options.

17  
18 The approved 230 kV intraconnection transmission line route options, as presented in ASC  
19 Exhibit C (Figures C-4a through C-4d), are summarized below:

- 20  
21 • Option 1: 31.5-mile 230 kV intraconnection transmission line extending from  
22 Wheatridge East Substation 3 to Wheatridge West Substation 1  
23
- 24 • Option 2: 31.3-mile 230 kV intraconnection transmission line extending from  
25 Wheatridge East Substation 3 to Wheatridge West Substation 2b, and then to  
26 Wheatridge West Substation 2a (alternate)  
27
- 28 • Option 3: 24.5-mile 230 kV intraconnection transmission line extending from  
29 Wheatridge West Substation 1 to Wheatridge East Substation 3  
30
- 31 • Option 4: 27.8 mile 230 kV intraconnection transmission line extending from  
32 Wheatridge West Substation 2a to Wheatridge West Substation 2b, and then to  
33 Wheatridge East Substation 3  
34  
35

#### 36 **I.D. Procedural History**

37  
38 The Council issued the *Final Order on the Application for Site Certificate* for the Wheatridge  
39 Wind Energy Facility (Final Order on ASC) on April 28, 2017. The site certificate became  
40 effective on May 24, 2017. On June 14, 2017, the certificate holder submitted Request for  
41 Amendment 1 (RFA1) of the site certificate, requesting to transfer certificate holder ownership  
42 from Swaggart Wind Power, LLC to a new parent company, NextEra Energy Resources, LLC. The  
43 Council issued the *Final Order on RFA1* and first amended site certificate on July 27, 2017. The

first amended site certificate became effective on August 17, 2017. On May 18, 2018, the certificate holder submitted Request for Amendment 2 (RFA2) and Request for Amendment 3 (RFA3). RFA2 requested approval for construction and operation of two battery storage systems, to be located in Wheatridge East and one in Wheatridge West. RFA3 requested approval to modify wind turbine specifications for maximum blade-tip height. The Council issued the *Final Order on RFA3* and second amended site certificate on November 16, 2018; Council issued the *Final Order on RFA2* and third amended site certificate on December 14, 2018.

## **II. AMENDMENT PROCESS**

### **II.A. Requested Amendment**

The certificate holder requests Council approval to add 1,527 acres to the site boundary for construction and operation of 150 megawatts (MW) of photovoltaic solar power generation equipment and up to 41 distributed energy storage (battery) systems. The proposed photovoltaic solar power generation equipment would be configured into two solar arrays (Solar Array 1 and Solar Array 2). Solar arrays would include a combination of solar modules, tracker systems, posts, and related electrical equipment, as further described in RFA4 Exhibit B and summarized below. The location of the proposed solar arrays and amended site boundary are presented in Figure 2: *Proposed Amended Site Boundary and Solar Array/Distributed Energy Storage Locations* below.

#### *Proposed Photovoltaic Solar Power Generation Equipment*

The certificate holder seeks Council approval for flexibility in final photovoltaic solar power generation technology selected during final design in order to maximize energy generation. The description of major components provided in RFA4 and summarized below is representative of the potential dimensions and numbers of equipment but is not intended to represent the exact configuration and generating technology. The major components are anticipated to stay the same, but their size, arrangement, and quantity of solar arrays would likely change; however, the certificate holder asserts that even with future, uncertain technological changes, impacts evaluated in RFA4 represent the maximum impacts that could occur from the proposed facility modifications.<sup>2</sup>

#### *Photovoltaic Modules and Racking*

Each solar module would measure approximately 6 feet by 3 feet, and would be placed on a nonspecular, galvanized steel rack. Each set of approximately 70 racked modules would be mounted approximately 5 feet off the ground on a single-axis tracker that would rotate 60 degrees to the east and west. Each tracker would be supported by steel posts; post depth would vary depending on soil conditions, but the posts are typically placed 8 feet below the surface. If soil conditions require it, concrete foundations would be used, but are not

---

<sup>2</sup> WRWAMD4Doc14-3 RFA4 Complete RFA4 Exhibit B. Project Desc Final, Section 2.0. 2019-07-01.

1 anticipated. Approximately 40,000 posts would be installed in locations based on the ground  
2 coverage ratio. The planned ground coverage ratio is 30 percent, meaning that the area  
3 occupied by the panels (when tilted horizontally) would be 30 percent of the total area within  
4 the fence line of the solar array area. The maximum of height of the modules at full tilt would  
5 be approximately 16 feet.<sup>3</sup>

6  
7 *Combiner Boxes, Inverters and Transformers*  
8

9 The current produced by solar modules is in the form of direct current (DC). Within each  
10 module block, several DC electrical conduits (cables on the back of the modules) would  
11 aggregate electricity produced from each of the modules into a combiner box. Approximately  
12 18 combiner boxes would be located throughout each module block for a total of  
13 approximately 740 combiner boxes.<sup>4</sup> The photovoltaic modules would be arranged into blocks,  
14 with each block connecting via collector lines to approximately 41 modular inverter enclosures.  
15 Inverters are used to convert DC current into alternating current (AC) power to then be  
16 transmitted to the grid. The inverter AC output voltage (480 volts) would be stepped up to a  
17 higher voltage (34.5 kilovolts [kV]) by approximately 41 pad-mounted transformers designed to  
18 integrate with the inverter.

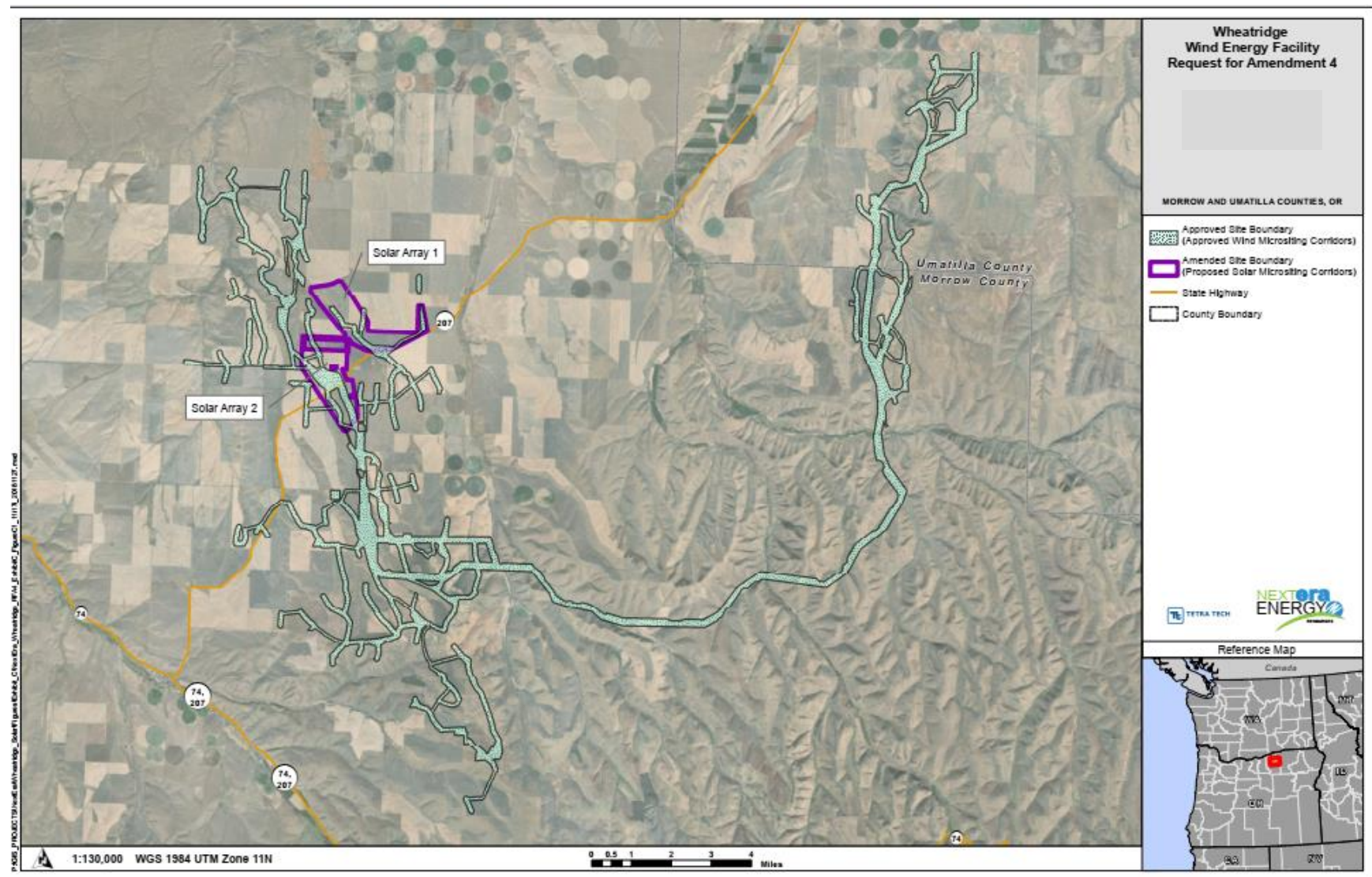
---

<sup>3</sup> WRWAMD4Doc14-3 RFA4 Complete RFA4 Exhibit B. Project Desc Final, Section 2.1. 2019-07-01.

<sup>4</sup> WRWAMD4Doc14-3 RFA4 Complete RFA4 Exhibit B. Project Desc Final, Section 2.2. 2019-07-01



## 7





1     *Electrical Collection System*

2  
3     Electricity generated from the proposed photovoltaic solar power generation equipment would  
4     be aggregated via underground 34.5 kV cables to an above- or belowground 34.5 kV collector  
5     line that would interconnect to Wheatridge West collector substation. Underground AC  
6     electrical cables would be buried to a minimum of 3 feet. Overhead collector lines would be  
7     supported by a wooden or steel monopole structure, with foundations extending 6 feet in  
8     depth and structure height of approximately 60 feet above ground. The certificate holder seeks  
9     approval for two 34.5 kV collector line routes outside of the proposed perimeter fenceline; one  
10    route would extend approximately 2.32 miles from proposed Solar Array 1 to the proposed  
11    expanded Wheatridge West collector substation located within the previously approved site  
12    boundary. The second collector line would interconnect proposed Solar Array 1 to Solar Array 2  
13    and would extend approximately 0.66 miles along Bombing Range Road. The certificate holder  
14    requests flexibility to construct the collector lines outside of the perimeter fenceline above- or  
15    belowground.

16  
17    *Service Roads, Gates, and Fencing*

18  
19    Service roads, approximately 16-foot wide, would be constructed within and around the  
20    perimeter of the proposed solar arrays, and within the solar micrositing corridors, to facilitate  
21    access for construction and maintenance purposes. Vegetation would be cleared and  
22    maintained along perimeter roads to provide a vegetation clearance area extending 100-foot  
23    wide for fire safety. Internal roads would be all-weather, compacted gravel and approximately  
24    20 feet wide, with an internal turning radius of 28 feet. Vegetation maintenance along  
25    proposed solar array interior roads would include mowing to a height no more than 3 inches.

26  
27    The perimeter service road would be bordered by a 7 or 8-foot-high chain-link security fence.  
28    There would also be locked security entrance gates to allow vehicle and pedestrian access.

29  
30    *Wheatridge West Collector Substation Expansion*

31  
32    One of the two collector substations approved in Wheatridge West (by Strawberry Lane) would  
33    be expanded from 5 to 10 acres to accommodate the additional electrical equipment such as an  
34    additional transformer, switches, protective relay and metering equipment needed to handle  
35    the power generated by the proposed photovoltaic solar power generating equipment.

36  
37    *Proposed Battery Storage Systems (DC Coupled)*

38  
39    Proposed battery storage would include up to 41 sites (distributed energy storage sites) of  
40    lithium-ion batteries in concrete containers throughout the solar array areas. Each container  
41    would measure up to 12 feet wide, 36 feet long, and 10 feet tall. Lithium-ion battery systems  
42    are modular systems, where each module contains multiple smaller battery cells, each

measuring up to 3.2 by 7 centimeters.<sup>5</sup> The cells are the primary containment for the gel or liquid electrolyte materials. Modules would be placed in anchored racks within the concrete containers; typically, each rack houses 12 battery modules along with a switchgear assembly. Cooling units would be placed either on top of the concrete containers or along the side.

Distributed energy storage allows for AC energy to be taken from the solar panels and interjected directly into the grid. Any energy not interjected to the grid would be transmitted to the previously approved 20 or 30 MW battery storage systems, which are DC coupled.

#### *Proposed Micrositing Approach and Location*

The certificate holder seeks Council approval for micrositing flexibility for the proposed photovoltaic solar power generation equipment and distributed energy storage systems within the identified amended site boundary area as presented in Figure 2: *Proposed Amended Site Boundary and Solar Array/Distributed Energy Storage Locations*. Micrositing corridors are intended 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 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.

OAR 345-027-0360(1)(d) requires that the certificate holder identify the specific language of the site certificate, including affected conditions, that the certificate holder proposes to change, add, or delete through the amendment process. In RFA4, the certificate holder seeks Council approval to amend four previously imposed condition including Land Use Condition 9 (GEN-LU-03), Land Use Condition 18 (PRE-LU-08), Fish and Wildlife Condition 3 (CON-FW-01), and Fish and Wildlife Habitat Condition 5 (CON-FW-02). The requested condition amendments are presented in RFA4 and evaluated in Section III.E. *Land Use* and III.H. *Fish and Wildlife Habitat* of this order.

#### **II.B. Amendment Review Process**

Council rules describe the processes for review of requests for site certificate amendment at OAR 345-027-0351. The Type A review is the standard or “default” site certificate amendment process for changes that require an amendment; RFA4 is being reviewed under the Type A review process. The Type A review includes a public hearing on the draft proposed order and an opportunity for a contested case proceeding. Council rules authorize the Department to adjust the timelines for these specific procedural requirements, if necessary.

On November 30, 2018 the Department received preliminary RFA4 (pRFA). At the time of submittal, pRFA4 did not include Exhibits H, M, P, S and X. These exhibits were received on

---

<sup>5</sup> WRWAMD4Doc14-3 RFA4 Complete RFA4 Exhibit B. Project Desc Final, Section 3.0. 2019-07-01.

December 21, 2018, at which time the Department initiated review. In accordance with OAR 345-027-0363(2), on February 19, 2019 the Department determined that pRFA4 was incomplete and issued a request for additional information.<sup>6</sup> On June 28, 2019, following review of the certificate holder's June 6 and June 12, 2019 to the information request, the Department issued determined that pRFA4 was complete.<sup>7</sup> The certificate holder submitted a complete RFA4 on July 1, 2019, and on the same day, the Department posted the complete RFA4 on its website and posted an announcement on the project website informing the public of receipt and availability for review of the complete RFA4.

#### Reviewing Agency Comments on preliminary Request for Amendment 4

The Department received comments on RFA4 from the following reviewing agencies:

- Oregon Department of State Lands
- Oregon Department of Geology and Mineral Industries
- Oregon Department of Fish and Wildlife
- Oregon State Historic Preservation Office
- Morrow County (Special Advisory Group)
- Confederated Tribes of the Umatilla Indian Reservation

Comments from these agencies, tribes and local governments are incorporated into the Council's analysis of Council standards below, as applicable, and provided in Attachment B of this order.

For reference, a special advisory group is defined as "the governing body of any local government within whose jurisdiction the facility is proposed to be located."<sup>8</sup> On November 2, 2012, EFSC designated the Umatilla County Board of Commissioners and Morrow County Court (Morrow County Board of Commissioners as of January 9, 2017) as the Special Advisory Groups (SAG) for the facility.

## **II.C. Council Review Process**

### *Draft Proposed Order*

On July 18, 2019, the Department issued the draft proposed order, and a notice of comment period on RFA4 and the draft proposed order (notice). The notice was distributed to all persons on the Council's general mailing list, to the special mailing list established for the facility, to an updated list of property owners supplied by the certificate holder, and to a list of reviewing agencies as defined in OAR 345-001-0010(52).

---

<sup>6</sup> WRWAMD4Doc11 Request for Additional Information 2019-02-19.

<sup>7</sup> WRWAMD4Doc14 RFA4 Completeness Letter 2019-06-28.

<sup>8</sup> ORS 469.480

1 The comment period extended 45-days, including 18-days following the public hearing on  
2 August 22, 2019 at 5:00 p.m. at the Port of Morrow's Riverfront Room at 2 Marine Drive NE,  
3 Boardman, Oregon 97818. In addition to accepting written comments during the comment  
4 period, the Council also accepted oral testimony at the public hearing.<sup>9</sup> The record of the draft  
5 proposed order closed on September 9, 2019 at 5 p.m., 18-days following the public hearing on  
6 August 22, 2019, as described in the public notice. During the 45-day public comment period,  
7 the Department received 8 written comments from members of the public including the  
8 certificate holder, reviewing agencies and Morrow County Board of Commissioners as the  
9 Special Advisory Group, as presented in Attachment C DPO Comment Index and Comments.<sup>10</sup>

10  
11 To raise an issue on the record of the draft proposed order, a person must raise the issue in a  
12 written comment submitted after the date of the notice of the draft proposed order received  
13 by the Department before the written comment deadline. The Council will not accept or  
14 consider public comments on the RFA4 or on the draft proposed order after the written  
15 comment deadline, listed above, that closes the record on the draft proposed order. Only those  
16 persons, including the site certificate holder, who provided written comment by the written  
17 comment deadline may seek judicial review as provided in ORS 469.403 and issues eligible for  
18 judicial review are limited to the issues raised in that person's written comments.

#### 19 20 *Proposed Order*

21  
22 On October 4, 2019 the Department issued a Proposed Order on Request for Amendment 4,  
23 which includes an evaluation of all comments received "on the record of the public hearing"  
24 (i.e., oral testimony provided at the public hearing and written comments received by the  
25 Department after the date of the notice of the public hearing and before the close of the public  
26 hearing comment period), including any comments from reviewing agencies, special advisory  
27 groups, Tribal Governments and the certificate holder. As presented in this order, all revisions  
28 incorporated by the Department from the draft proposed order to the proposed order are  
29 presented in underlined, red font text, to allow the reader the opportunity to clearly track the  
30 changes between orders. Recommended amended condition language previously presented in  
31 the draft proposed order maintains underlined text, to demonstrate proposed changes to the  
32 site certificate, but is presented in underlined, black font text, to delineate the differences  
33 between changes presented in the draft proposed order versus changes presented in the  
34 proposed order.

35  

---

<sup>9</sup> OAR 345-027-0367(6).

<sup>10</sup> WRWAMD4. August 26, 2019 Council Meeting Audio File. On the record of the Draft Proposed Order Public Hearing, at the August 26, 2019 Council meeting, oral comments were provided from Carla McLane, Planning Director of Morrow County Planning Department; Mike Pappalardo, representative of the certificate holder, NextEra Energy Resources; and, Ms. Irene Gilbert. At the hearing, there were no substantive issues raised or specific comments related to RFA4 or the DPO provided in oral testimony and are not further described in this order.

1 Concurrent with the issuance of the proposed order, the Department issued a Notice of  
2 Opportunity to Request a Contested Case and a public notice of the proposed order.<sup>11</sup> The  
3 Notice of Opportunity to Request a Contested Case was distributed to all persons that  
4 comments “on the record of the public hearing.” The public notice of the proposed order was  
5 distributed to all persons on the Council’s general mailing list, to the special mailing list  
6 established for the facility, to a current list of property owners supplied by the certificate  
7 holder, and to a list of reviewing agencies as defined in OAR 345-001-0010(52).

8  
9 Only those persons who comment in person or in writing on the record of the public hearing  
10 may request a contested case proceeding on their issues raised, unless the Department did not  
11 follow the requirements of OAR 345-027-0367, or unless the action recommended in the  
12 proposed order differs materially from the draft proposed order, including any recommended  
13 conditions of approval, in which case the person may raise only new issues within the  
14 jurisdiction of the Council that are related to such differences. If the Council finds that a request  
15 for contested case identifies one or more properly raised issues that justify a contested case  
16 proceeding, the Council shall conduct a contested case proceeding on the proposed order.  
17 All rules and supporting evidence that a person may wish to cite or include in a request for a  
18 contested case proceeding must be included in comments provided on the record of the draft  
19 proposed order public hearing. See OAR 345-027-0367(3)(G) “The Council will not accept or  
20 consider any further public comment on the request for amendment or on the draft proposed  
21 order after the close of the public hearing.”<sup>12</sup>

22  
23 Importantly, however, as further described below, pursuant to OAR 345-027-0371(5),  
24 individuals who comment in person or in writing on the record of the public hearing may  
25 request a contested case proceeding on *new* issues related to material changes, including any  
26 recommended conditions of approval, presented in the proposed order [Emphasis added]. It is  
27 not the Department’s position that an individual interested in raising issues related to material  
28 changes presented in the proposed order be limited to the rules and supporting evidence  
29 submitted in their specific issues raised on the record of the DPO; it is the Department’s  
30 position that a request for contested case is not an opportunity to further supplement an  
31 individual’s original issue raised with rules, citations and supporting evidence without regard to  
32 material changes made in the proposed order in response to the issue. It is, however, an  
33 opportunity to raise new issues related to material changes made in response to such issues.

34  
35 To raise an issue in a contested case proceeding, the issue must be within Council jurisdiction,  
36 and the person must have raised the issue on the record of the public hearing with “sufficient  
37 specificity to afford the Council, the Department, and the certificate holder an adequate

---

<sup>11</sup> See OAR 345-027-0371.

<sup>12</sup> SRWAMD4. DPO Public Comment Gilbert. 2019-09-09. On the record of the draft proposed order, Ms. Gilbert argues that this statement is not consistent with ORS 469.370(3) and OAR 345-067-0067(5)(b) and represents an arbitrary requirement imposed on lay people intended to block members of the public from a contested case proceeding. In the proposed order, the Department provided additional analysis on the basis and purpose of the statement.

1 opportunity to respond to the issue.”<sup>13</sup> To raise an issue with sufficient specificity, a person  
2 must have presented facts, on the record of the public hearing, that support the person’s  
3 position on the issue. The purpose of OAR 345-027-0367 is to ensure that the public provides  
4 the Department and Council all comments, including any documents or statutory or regulatory  
5 citations, that the public believes are relevant to the site certificate analysis conducted by the  
6 Department and Council at a point in the process where the Department, Council and  
7 certificate holder have “an adequate opportunity to respond to the issue”(as stated in OAR 345-  
8 027-0367(5)(b)) – *i.e.*, at a point when the Department can address any relevant issues raised  
9 by those comments in the proposed order. Allowing a person requesting a contested case to  
10 submit new or additional documents, information or regulatory citations that might have  
11 influenced the Council’s comments regarding a draft proposed order and the Department’s  
12 preparation of a proposed order undermines that goal.

13  
14 It is not the Department or Council’s position that all information that would be submitted *in* a  
15 contested case proceeding be submitted in comments provided on the record of the draft  
16 proposed order. It is not the Department’s intent, nor does the Department have the authority,  
17 to limit the level, type and amount of information that may be submitted in a contested case  
18 proceeding, if requested and granted by Council on a site certificate amendment. A contested  
19 case proceeding is an evidentiary process overseen by an independent hearing officer, whom  
20 has the discretion to allow the introduction of new evidence into the record for the purpose of  
21 evaluating contested case issues.

#### 22 23 *Contested Case Request on Proposed Order*

24  
25 One individual, Irene Gilbert, as an individual and also representing Friends of the Grande  
26 Ronde Valley (Gilbert) requested Council grant a contested case to evaluate specific issues on  
27 the proposed order.

28  
29 A summary of issues raised in Ms. Gilbert’s request for contested case received is provided  
30 below. The analysis and Council decision denying the request for a contested case proceeding  
31 are provided in the November 2019 Order on Request for Contested Case on the Proposed  
32 Order on Request for Amendment 4 of the Wheatridge Wind Energy Facility Site Certificate  
33 (November Order on Request).

#### 34 35 *Summary of Issues Raised by Gilbert*

36  
37 Ms. Gilbert requested a contested case proceeding to allow for interpretation of OAR 345-027-  
38 0367(5)(b). Ms. Gilbert also requested a contested case proceeding to evaluate the certificate  
39 holder’s ability to comply with state statutes regarding the control of noxious weeds; and, the  
40 certificate holder’s ability to adequately assess direct and indirect damage to habitat  
41 considered critical to the survival of federally-listed threatened and endangered avian species.

---

42  
<sup>13</sup> OAR 345-027-0371(5).

*Summary of Council Review of Requests for Contested Case*

The Council considered the contested case requests at its November 22, 2019 meeting, held in The Dalles, Oregon. At that meeting, the Council found that the issues raised in the contested case requests were properly raised, but that none of the issues justified a contested case. Based on Council deliberation, Council issued the November Order on Request documenting the reasoning and analysis for denying a contested case proceeding for the issues raised in contested case requests received. As provided in the Notice of Appeal in the November Order on Request, persons whose request for a contested case have been denied by the final order may file a petition for reconsideration with the Council within 60 days after the date of [service of](#) the order (OAR 345-001-0080). Additionally, persons whose request for a contested case have been denied by the final order may seek judicial review of the order, without first filing a petition for reconsideration with the Council. Petitions for judicial review shall be filed within 60 days following the date of [service of](#) the order, unless a petition for reconsideration has been filed, in which case the petition for judicial review must be filed within 60 days following the date any order denying a petition for reconsideration is served.

If the Council does not issue an order in response to a petition for reconsideration, per OAR 345-001-0080(4) and ORS 183.484(2), the petition for reconsideration shall be deemed denied the 60<sup>th</sup> day following the date the petition was filed, and in such case, a petition for judicial review shall be filed within 60 days only following such date.

*Final Order*

On November 22, 2019, the Council issued this final order approving the site certificate amendment request based upon the applicable laws and Council standards required under OAR 345-027-0375(2) and in effect on the dates described in OAR 345-027-0375(3). The Council's final order is subject to judicial review by the Oregon Supreme Court as provided in ORS 469.403. A petition for judicial review of the Council's approval of an application for amended site certificate must be filed with the Supreme Court within 60 days after the date of service of the Council's final order (see Notice of Appeal on final page of order for additional details on date of service.<sup>14</sup>

**II.D. Applicable Division 27 Rule Requirements**

On August 22, 2019, the Council adopted temporary rules governing the process for amending site certificates. The temporary rules are in effect until February 17, 2020. Amongst other changes, the temporary rules replaced the amendment processing rules contained in OAR 345, Division 27. The temporary rules also include renumbering the Division 27 ruleset to govern site certificate amendment processing. The temporary rules include rules numbered in the Division 27, "-0300" series. References in this order reflect the temporary rule numbering. However,

---

<sup>14</sup> ORS 469.403 and OAR 345-027-0371(12).

rule references in the preliminary and complete requests for amendment, as well as the Department's draft proposed order, all of which were released prior to the August 22, 2019 adoption of temporary rules, include reference to the prior Division 27 rules.

As stated in OAR 345-027-0311(1), "The rules in this division apply to all requests for amendment to a site certificate and amendment determination requests for facilities under the Council's jurisdiction that are submitted to, or were already under review by, the Council on or after the effective date of the rules. The Department and Council will continue to process all requests for amendment and amendment determination requests submitted on or after October 24, 2017 for which Council has not made a final decision prior to the effective date of these rules, without requiring the certificate holder to resubmit the request or to repeat any steps taken as part of the request prior to the effective date of these rules." This reference includes Request for Amendment 4 of the Wheatridge Wind Energy Facility Site Certificate.<sup>15</sup>

A site certificate amendment is necessary under OAR 345-027-0350(4) because the certificate holder requests to design, construct, and operate the facility in a manner different from the description in the site certificate, and the proposed changes: (1) could result in a significant adverse impact to a resource or interest protected by a Council standard that the Council has not addressed in an earlier order; (2) could impair the certificate holder's ability to comply with a site certificate condition; or (3) could require new conditions or modification to existing conditions in the site certificate, or could meet more than one of these criteria.

The Type A amendment review process (consisting of OARs 345-027-0359, -0360, -0363, -0065, -0067, -0071 and -0075) is the default amendment review process and shall apply to the Council's review of a request for amendment proposing a change described in OAR 345-027-0350(2), (3), and (4).<sup>16</sup>

### **III. REVIEW OF THE REQUESTED AMENDMENT**

Under ORS 469.310, the Council is charged with ensuring that the "siting, construction and operation of energy facilities shall be accomplished in a manner consistent with protection of the public health and safety." ORS 469.401(2) further provides that the Council must include in the amended site certificate "conditions for the protection of the public health and safety, for the time for completion of construction, and to ensure compliance with the standards, statutes and rules described in ORS 469.501 and ORS 469.503."<sup>17</sup> The Council implements this statutory

---

<sup>15</sup> SRWAMD4. DPO Public Comments Friends of Columbia Gorge 2019-08-08. On the record of the draft proposed order, Friends et. al raise a procedural issue based on the August 1, 2019 Supreme Court decision declaring that the OAR 345 Division 27 rules are invalid. First, they argue that RFA4 is invalid, cannot be processed further and must be denied because it was filed under rules the Supreme Court has held to be invalid. Second, Friends et. al argue that (assuming RFA4 is invalid), RFA4 cannot be retroactively processed under rules that were not in effect at the time the amendment request was submitted, nor under rules later adopted. In the proposed order, the Department provided additional analysis refuting the procedural issue raised.

<sup>16</sup> OAR 345-027-0351(2).

<sup>17</sup> ORS 469.401(2).



framework by adopting findings of fact, conclusions of law, and conditions of approval concerning the amended facility's compliance with the Council's Standards for Siting Facilities at OAR 345, Divisions 22, 24, 26 and 27.

This final order includes the Council's analysis of whether the proposed changes meet each applicable Council Standard (with mitigation and subject to compliance with existing, new, and amended conditions, as applicable), based on the information in the record.

### **III.A. General Standard of Review: OAR 345-022-0000**

*(1) To issue a site certificate for a proposed facility or to amend a site certificate, the Council shall determine that the preponderance of evidence on the record supports the following conclusions:*

*(a) The facility complies with the requirements of the Oregon Energy Facility Siting statutes, ORS 469.300 to ORS 469.570 and 469.590 to 469.619, and the standards adopted by the Council pursuant to ORS 469.501 or the overall public benefits of the facility outweigh the damage to the resources protected by the standards the facility does not meet as described in section (2);*

*(b) Except as provided in OAR 345-022-0030 for land use compliance and except for those statutes and rules for which the decision on compliance has been delegated by the federal government to a state agency other than the Council, the facility complies with all other Oregon statutes and administrative rules identified in the project order, as amended, as applicable to the issuance of a site certificate for the proposed facility. If the Council finds that applicable Oregon statutes and rules, other than those involving federally delegated programs, would impose conflicting requirements, the Council shall resolve the conflict consistent with the public interest. In resolving the conflict, the Council cannot waive any applicable state statute.*

*\*\*\**

*(4) In making determinations regarding compliance with statutes, rules and ordinances normally administered by other agencies or compliance with requirements of the Council statutes if other agencies have special expertise, the Department of Energy shall consult such other agencies during the notice of intent, site certificate application and site certificate amendment processes. Nothing in these rules is intended to interfere with the state's implementation of programs delegated to it by the federal government.*

### **Findings of Fact**

OAR 345-022-0000 provides the Council's General Standard of Review and requires the Council to find that a preponderance of evidence on the record supports the conclusion that proposed RFA4 facility components would comply with the requirements of EFSC statutes and the siting

standards adopted by the Council and that proposed RFA4 facility components would comply with all other Oregon statutes and administrative rules applicable to the issuance of an amended site certificate for the facility.

The requirements of OAR 345-022-0000 are discussed in the sections that follow. The Department consulted with other state agencies and Morrow County Planning Department on behalf of Morrow County Board of Commissioners during review of pRFA4 to aid in the evaluation of whether proposed RFA4 facility components would maintain compliance with statutes, rules and ordinances otherwise administered by other agencies. Additionally, in many circumstances the Council relies upon these reviewing agencies' special expertise in evaluating compliance with the requirements of Council standards, as discussed in the applicant sections of this order.

#### *Certificate Expiration (OAR 345-027-0313)*

A site certificate, or amended site certificate, becomes effective upon execution by the Council Chair and the certificate holder. A site certificate, or amended site certificate, expires if construction has not commenced on or before the construction commencement deadline, as established in the site certificate and statutorily required under ORS 469.401(2).

The Council's imposition of construction deadlines in the amended site certificate should reflect a balance between the Council's concern regarding potential circumstantial changes (regulatory and environmental) and the individual circumstances of the amendment request. In addition, the Council acknowledges that there are a number of unforeseen factors that can delay a certificate holder's commencement of construction and completion, including but not limited to financial, economic, or technological changes. The Council also notes that while each amendment request is evaluated on its own facts, historic Council decisions on construction and commencement deadlines were reviewed to inform this analysis. In most instances of decisions on applications, Council has required construction commencement and completion of wind and solar energy facilities within three and six years, respectively, after the effective date of the amended site certificate.

The certificate holder's request to begin and complete construction of proposed RFA4 facility components are consistent with these timelines. In RFA4, the certificate holder explains that these timeframes would provide sufficient time for satisfying pre-construction condition requirements established in the amended site certificate, allow sufficient time to obtain required permits not governed by the site certificate, and would be consistent with past Council requirements.<sup>18</sup> The certificate holder has not requested a construction timeline extension for the previously approved wind facility components. RFA4 represents that, if approved, construction of proposed RFA4 facility components would not overlap with construction of wind facility components, or that any overlap in activities would not result in greater construction-related impacts than was previously evaluated in the *Final Order on the ASC*. The

---

<sup>18</sup> WRWAMD4Doc14-3 RFA4 Complete RFA4 Exhibit B. Project Desc Final, Section 7.0. 2019-07-01.

Council grants construction commencement and completion deadlines based upon three and six years following the date of Council approval for only the facility components evaluated and approved as part of RFA4. The Council amends General Standard Condition 1 (GEN-GS-01) and General Standard Condition 2 (GEN-GS-02) as presented in underline/strikethrough below:

**Amended General Standard Condition 1 (GEN-GS-01):** The certificate holder shall:

- a. Begin construction of wind facility components and its related or supporting facilities, the facility 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.
- 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.

[Final Order on ASC, General Standard Condition 1; AMD2; AMD4]

[Mandatory Condition OAR 345-025-0006(4)]

**Amended General Standard Condition 2 (GEN-GS-02):** The certificate holder shall:

- 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.
- 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.

[Final Order on ASC, General Standard Condition 2; AMD2; AMD4]

[Mandatory Condition OAR 345-025-0006(4)]

*Mandatory and Site-Specific Conditions in Site Certificates [OAR 345-025-0006 and OAR 345-025-0010]*

OAR 345-025-0006 lists certain conditions that the Council must adopt in every site certificate. Some mandatory conditions directly implement a Council standard and have therefore been previously imposed as conditions, which would continue to apply, under the relevant standard.<sup>19</sup>

<sup>19</sup> Previously imposed conditions include: GEN-GS-03, GEN-GS-04, GEN-GS-05, GEN-GS-06, GEN-GS-07, GEN-GS-08, GEN-GS-09, GEN-GS-10, GEN-GS-11, GEN-RF-01, PRE-RF-01, OPR-GS-01, RET-RF-01, RET-RF-02, and GEN-GS-12.

*Construction and Operation Rules for Facilities [OAR Chapter 345, Division 26]*

The Council has also adopted rules at OAR Chapter 345, Division 26 to ensure that construction, operation, and retirement of facilities are accomplished in a manner consistent with the protection of public health, safety, and welfare and protection of the environment. These rules include requirements for compliance plans, inspections, reporting and notification of incidents. The certificate holder must construct the facility substantially as described in the site certificate and the certificate holder must construct, operate, and retire the facility in accordance with all applicable rules adopted by the Council in OAR Chapter 345, Division 26.

**Conclusions of Law**

Based on the findings of fact and conclusions of law, and subject to compliance with existing and amended site certificate conditions, the Council finds that proposed RFA4 facility components would satisfy the requirements of OAR 345-022-0000.

**III.B. Organizational Expertise: OAR 345-022-0010**

- (1) To issue a site certificate, the Council must find that the applicant has the organizational expertise to construct, operate and retire the proposed facility in compliance with Council standards and conditions of the site certificate. To conclude that the applicant has this expertise, the Council must find that the applicant has demonstrated the ability to design, construct and operate the proposed facility in compliance with site certificate conditions and in a manner that protects public health and safety and has demonstrated the ability to restore the site to a useful, non-hazardous condition. The Council may consider the applicant's experience, the applicant's access to technical expertise and the applicant's past performance in constructing, operating and retiring other facilities, including, but not limited to, the number and severity of regulatory citations issued to the applicant.*
- (2) The Council may base its findings under section (1) on a rebuttable presumption that an applicant has organizational, managerial and technical expertise, if the certificate holder has an ISO 9000 or ISO 14000 certified program and proposes to design, construct and operate the facility according to that program.*
- (3) If the applicant does not itself obtain a state or local government permit or approval for which the Council would ordinarily determine compliance but instead relies on a permit or approval issued to a third party, the Council, to issue a site certificate, must find that the third party has, or has a reasonable likelihood of obtaining, the necessary permit or approval, and that the applicant has, or has a reasonable likelihood of entering into, a contractual or other arrangement with the third party for access to the resource or service secured by that permit or approval.*

1       (4) *If the applicant relies on a permit or approval issued to a third party and the third party*  
2       *does not have the necessary permit or approval at the time the Council issues the site*  
3       *certificate, the Council may issue the site certificate subject to the condition that the*  
4       *applicant shall not commence construction or operation as appropriate until the third*  
5       *party has obtained the necessary permit or approval and the applicant has a contract or*  
6       *other arrangement for access to the resource or service secured by that permit or*  
7       *approval.*

8  
9       **Findings of Fact**

10  
11       Subsections (1) and (2) of the Council's Organizational Expertise standard require that the  
12       certificate holder demonstrate its ability to design, construct and operate proposed RFA4  
13       facility components, in compliance with Council standards and all site certificate conditions, and  
14       in a manner that protects public health and safety, as well as its ability to restore the site to a  
15       useful, non-hazardous condition. The Council may consider the certificate holder's experience  
16       and past performance in constructing, operating and retiring other facilities in determining  
17       compliance with the Council's Organizational Expertise standard. Subsections (3) and (4)  
18       address third party permits.

19  
20       *Compliance with Council Standards and Site Certificate Conditions*

21  
22       The Council may consider a certificate holder's past performance, including but not limited to  
23       the quantity or severity of any regulatory citations in the construction or operation a facility,  
24       type of equipment, or process similar to the facility, in evaluating whether a proposed change  
25       may impact the certificate holder's ability to design, construct and operate a facility in  
26       compliance with Council standards and site certificate conditions.<sup>20</sup> To evaluate whether  
27       construction and operation of proposed RFA4 facility components would impact the certificate  
28       holder's ability to comply with Council standards and site certificate conditions, the Council  
29       evaluates the certificate holder's relevant experience constructing and operating solar facilities  
30       and whether any regulatory citations have been received for its facilities.

31  
32       Wheatridge Wind Energy, LLC, is a project-specific LLC and therefore relies upon the  
33       organizational expertise and experience of its parent company, NextEra.<sup>21</sup> NextEra has  
34       experience in pre-construction, construction and operation of 90 operational solar facilities  
35       totaling more than 2,000 MW, during which RFA4 states that no regulatory citations have been  
36       received.

---

<sup>20</sup> OAR 345-021-0010(1)(d)(D)

<sup>21</sup> As noted in the Council's *Final Order on Amendment 1*, the certificate holder's parent company, NextEra, maintains approximately 66 billion dollars in capital and produces approximately 19,882 MW of energy from 175 facilities located throughout the United States and Canada. NextEra maintains a workforce of approximately 5,000 professionals that are employed in fields such as operations and maintenance, development, environmental services, construction, engineering, and legal services.

1  
2 The certificate holder represents that qualified contractors, engineers, and manufacturers  
3 would be selected to construct proposed RFA4 facility components; and, that these contractors,  
4 engineers, and manufacturers would comply with site certificate conditions. Council previously  
5 imposed Organizational Expertise Conditions 1 and 3 (PRE-OE-01 and PRE-OE-03) requiring the  
6 certificate holder to, prior to construction, provide the Department the major design,  
7 engineering, and construction contractor qualifications demonstrating substantial experience in  
8 such work for similar facilities; and, contractually require contractors to comply with all  
9 applicable laws and regulations, and the terms of the site certificate.

10  
11 The Council finds that the certificate holder has demonstrated an ability to design, construct,  
12 and operate RFA4 facility components in compliance with Council standards and site certificate  
13 conditions for the following reasons: the certificate holder demonstrates continued experience  
14 constructing and operating wind and solar facilities; the certificate holder has not received  
15 regulatory citations for any of its facilities, including its EFSC jurisdictional wind facility  
16 (Stateline Wind Project); and, existing site certificate conditions require the certificate holder to  
17 select qualified contractors and contractually require compliance with site certificate conditions  
18 during facility design, construction and engineering.

19  
20 *Public Health and Safety*

21  
22 Construction and operation of the proposed RFA4 facility components could result in public  
23 health and safety risks from proximity to electrical equipment, during battery and battery waste  
24 transport; and, onsite handling and storage of battery-related materials and waste; and,  
25 additional fire risks from construction activities and industrial development on lands used for  
26 agriculture, habitat and grassland, which may be subject to increased wildfire risk. This is  
27 further discussed in Sections III.P.M., *Public Services* and III.P.3. *Siting Standards for*  
28 *Transmission Lines* of this order.

29  
30 The certificate holder also described that potential safety hazards from onsite handling,  
31 management and transport of batteries and battery waste would be minimized through proper  
32 personnel training, safe interim storage, segregation from other potential waste streams, and  
33 adherence to 49 CFR 173.185 Department of Transportation Pipeline and Hazardous Material  
34 Administration handling guidelines. As described in the certificate holder's example Emergency  
35 Action Plan, provided in RFA4 Exhibit H, potential fire hazards from over charging, over current  
36 or over temperature operation of the batteries would be minimized by autonomous monitoring  
37 from a "Battery Management System." The "Battery Management System" includes  
38 autonomous monitoring by bidirectional inverters and a site controller. Bidirectional inverters  
39 are equipped with controls to detect out of specification conditions and would autonomously  
40 stop operation in the event of overcurrent or out of specification voltage. A site controller  
41 continuously monitors all critical parameters and would autonomously disconnect the system in  
42 the event of an out of specification condition. The sites would also be continuously monitored  
43 by an offsite 24-hour Control Room Operator. In the event of an out of specification condition,  
44 the Control Room Operator has the ability to remotely control the battery storage system.

1 Additionally, each battery module and battery rack would be individually protected by  
2 overcurrent fuses.

3  
4 Council previously imposed Public Services Condition 13 (PRE-PS-05) requiring that, prior to  
5 construction, the certificate holder submit for Department review and approval, in consultation  
6 with the applicable fire districts, an Emergency Management Plan. The existing condition  
7 requires that the plan include procedures and actions described in “this order” and in ASC  
8 Exhibit U. Therefore, the Council considers that the existing condition incorporates procedures  
9 and actions presented in all Final Orders for Council proceedings for this facility, and thereby  
10 applies to the actions and procedures outlined in the Emergency Action Plan provided in RFA4  
11 Exhibit H Attachment H-1.

12  
13 Based upon the evidence on the record, and compliance with existing and amended conditions  
14 presented in this order, the Council finds that the certificate holder has provided reasonable  
15 assurance that it can successfully construct, operate and retire proposed RFA4 facility  
16 components in a manner that protects public health and safety in accordance with the  
17 Organizational Expertise standard.

18  
19 *Ability to Restore the Site to a Useful, Non-Hazardous Condition*

20  
21 The certificate holder’s ability to restore the facility site to a useful, non-hazardous condition is  
22 evaluated in Section III.G, *Retirement and Financial Assurance* of this order, in which the Council  
23 finds that the certificate holder would continue to be able to comply with the Retirement and  
24 Financial Assurance standard.

25  
26 *ISO 900 or ISO 14000 Certified Program*

27  
28 OAR 345-022-0010(2) is not applicable because the certificate holder has not proposed to  
29 design, construct or operate the facility, with proposed changes, according to an ISO 9000 or  
30 ISO 14000 certified program.

31  
32 *Third-Party Permits*

33  
34 OAR 345-022-0010(3) addresses the requirements for potential third party contractors. In RFA4,  
35 the certificate holder identifies two permits that may be required for construction that may  
36 obtained by third-party contractors, if required. The third-party permits would include an  
37 Oregon Department of Environmental Quality (DEQ) issued general water pollution control  
38 facilities permit for wastewater and stormwater management of a temporary construct batch  
39 plant (WPCF-1000); a DEQ issued general water pollution control facilities permit for solar  
40 module washing during facility operations (WPCF-1700-B); a Oregon Water Resources  
41 Department (OWRD) issued limited water use license for construction-related water use; and a  
42 Oregon Department of Transportation (ODOT) issued oversize load movement permit/load  
43 registration for transporting large or overweight equipment to the site. While not specifically  
44 identified in RFA4, because a third-party DEQ issued WPCF-1000 permit was identified for a

temporary batch plant, it is possible that additional third-party permits would be required for a temporary concrete batch plant, including a land use permit from Morrow County and a DEQ issued Air Contaminant Discharge Permit.

OAR 345-022-0010(3) addresses requirements for a certificate holder when there are resources or activities necessary for construction or operation that rely upon resources supplied by a third-party permit. In RFA4 Exhibit E, the certificate holder identifies that the following permits and review may be required for construction, that would be obtained by third-party contractors:<sup>22</sup>

- Oregon Department of Environmental Quality (DEQ) issued general water pollution control facilities permit for wastewater and stormwater management of a temporary construct batch plant (WPCF-1000)
- DEQ issued Air Contaminant Discharge Permit for a mobile batch plant for production of concrete
- Oregon Water Resources Department (OWRD) issued limited water use license for construction-related water use
- Morrow County issued Conditional Use Permit for mobile batch plant
- Crossing permit reviewed by Umatilla Electric Cooperative (UEC) for the potential crossing of the proposed 34.5 kV collector line of an existing UEC line

Council previously imposed Organizational Expertise Condition 8 (PRE-OE-06) based on the certificate holder's representation of third-party permits needed for construction and operation of the facility. The Council amends the previously imposed condition based on the third-party permits identified as potentially necessary for construction and operation of proposed RFA4 facility components, as follows:

**Amended Organizational Expertise Condition 8 (PRE-OE-06):** ~~Before beginning construction on any phase of the facility, the certificate holder must:~~

- 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.
- 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

---

<sup>22</sup> In RFA4 Exhibit E, the certificate holder identifies that if solar module washing is required during facility operations, a DEQ issued general water pollution control facilities permit for (WPCF-1700-B) would be obtained by a third-party contractor. However, the Council understands that DEQ considers wastewater disposal through seepage and evaporation from this type of activity as a de minimus activity no longer requiring a WPCF 1700-B.



Permit, Limited Water Use License). Once obtained, the certificate holder shall provide copies of third-party permits to the Department.

- 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.

[Final Order on ASC, Organizational Expertise Condition 8; AMD4]

Based on compliance with amended Organizational Expertise Condition 8 (PRE-OE-06), the Council finds that the certificate holder would have a reasonable likelihood of obtaining access to the resources secured by third-party permits.

### **Conclusions of Law**

Based on the evidence in the record, and subject to compliance with the existing and amended conditions, the Council finds that the certificate holder would continue to satisfy the requirements of the Council's Organizational Expertise standard.

### **III.C. Structural Standard: OAR 345-022-0020**

- (1) *Except for facilities described in sections (2) and (3), to issue a site certificate, the Council must find that:*

(a) *The applicant, through appropriate site-specific study, has adequately characterized the seismic hazard risk of the site;*

(b) *The applicant can design, engineer, and construct the facility to avoid dangers to human safety and the environment presented by seismic hazards affecting the site, as identified in subsection (1)(a);*

(c) *The applicant, through appropriate site-specific study, has adequately characterized the potential geological and soils hazards of the site and its vicinity that could, in the absence of a seismic event, adversely affect, or be aggravated by, the construction and operation of the proposed facility; and*

(d) *The applicant can design, engineer and construct the facility to avoid dangers to human safety and the environment presented by the hazards identified in subsection (c).*

- (2) *The Council may not impose the Structural Standard in section (1) to approve or deny an application for an energy facility that would produce power from wind, solar or geothermal energy. However, the Council may, to the extent it determines appropriate, apply the requirements of section (1) to impose conditions on a site certificate issued for such a facility.*

1       (3) *The Council may not impose the Structural Standard in section (1) to deny an application*  
2       *for a special criteria facility under OAR 345-015-0310. However, the Council may, to the*  
3       *extent it determines appropriate, apply the requirements of section (1) to impose*  
4       *conditions on a site certificate issued for such a facility.*

5  
6       **Findings of Fact**

7  
8       As provided in section (1) above, the Structural Standard generally requires the Council to  
9       evaluate whether the certificate holder has adequately characterized the potential seismic,  
10      geological and soil hazards of a proposed site, and whether the certificate holder demonstrates  
11      that it can design, engineer and construct proposed facility components to avoid dangers to  
12      human safety and the environment from these hazards.

13  
14     As established in the Project Order, the analysis area for the Structural Standard is the area  
15     within the site boundary, and for this amendment request includes the area within the  
16     proposed amended site boundary. "Site boundary," as defined in OAR 345-001-0010(55), is the  
17     area within the perimeter of the facility, its related or supporting facilities, all temporary  
18     laydown and staging areas, and all micro-siting corridors proposed by the applicant." As noted in  
19     RFA4 Exhibit H, the certificate holder applies a larger analysis area for evaluation of seismic  
20     hazards, including a 50-mile analysis area for all recorded earthquakes.

21  
22     *DOGAMI Consultation*

23  
24     Council rules at OAR Chapter 345 Division 21 require the certificate holder to consult with the  
25     Oregon Department of Geology and Mineral Industries (DOGAMI) on the appropriate  
26     methodology and scope of the seismic hazards and geology and soil-related hazards  
27     assessments, and the appropriate site-specific geotechnical work that must be completed to  
28     inform an ASC or amendment request and demonstrate compliance with the Council's  
29     Structural Standard. Based on this requirement, the certificate holder consulted with DOGAMI  
30     and the Department on November 14, 2018. The notes from the consultation are included in  
31     RFA4 Exhibit H Attachment H-1 and were reviewed by DOGAMI for confirmation of accuracy on  
32     March 15, 2019 (included with reviewing agency comments in Attachment B of this order).

33  
34     In summary, through consultation, DOGAMI provided various recommendations on methods  
35     for evaluating seismic and non-seismic hazards at the site. DOGAMI recommended that the  
36     certificate holder conduct site specific response spectra and evaluate long-period ground  
37     motion to evaluate potential seismic risk and inform design standards for proposed RFA4  
38     facility components. DOGAMI requested that a site-specific evaluation of active faults (inclusive  
39     of Quaternary faults) and earthquakes be completed beyond a literature review, and that the  
40     evaluation of landslide hazards be based on review of LIDAR data, accepting that the site-  
41     specific evaluation may be conducted as a pre-construction condition. DOGAMI reiterated that  
42     LIDAR is standard of practice and it might be available on the DOGAMI website for this area,  
43     especially where there are active faults and dense tree coverage. In addition to the  
44     consultation, DOGAMI reviewed and provided comments on pRFA4; responses to DOGAMI

1 comments were incorporated into RFA4 and are evaluated in this order. As evaluated below,  
2 the certificate holder presents an analysis and proposes methods, to be used in a pre-  
3 construction site specific geotechnical investigation, consistent with DOGAMI  
4 recommendations.

5  
6 *Seismic and Non-Seismic Hazards of Site*  
7

8 OAR 345-022-0020(1)(a) and (c) require the Council to find that the certificate holder has  
9 adequately characterized the seismic and non-seismic hazards of a proposed site.

10  
11 To evaluate potential seismic (earthquake) and non-seismic hazards (landslides, volcanic  
12 activity, erosion, flooding, shrinking and swelling soils) within the surrounding area, the  
13 certificate holder evaluates published data from the 2017 Statewide Landslide Information  
14 Database for Oregon (SLIDO 3.4), 2017 Statewide Flood Hazard Database for Oregon, the  
15 Oregon Water Resources Department, USGS National Seismic Hazard Mapping Project  
16 Webpage, and the Natural Resources Conservation Service (NRCS) Soil Survey Geographic  
17 Database and 2018 Quaternary Fault and Fold Database. In addition, the certificate holder  
18 evaluated subsurface soil and groundwater conditions based on 2019 geotechnical subsurface  
19 investigation and relied upon ASC Exhibit H. Based on this review, four earthquake sources  
20 were identified within the vicinity of the proposed amended site boundary: crustal, interpolate,  
21 volcanic and the Cascadia Subduction Zone (CSZ). Of these, the deep subduction zone  
22 earthquake along the CSZ has the potential to produce the largest magnitude earthquake.

23  
24 As described in RFA4 Exhibit H, there are no known active faults within the proposed amended  
25 site boundary (as approved or as proposed to be amended). Previously recorded significant  
26 earthquakes within 50-miles of the proposed amended site boundary are presented in RFA4  
27 Exhibit H Table H-2, with the most recent significant earthquake occurring in 2009 and resulting  
28 in a 2.8 moment magnitude (where a 3.0 moment magnitude represents shaking that is  
29 noticeable indoors). Seismic hazards from earthquake events include seismic shaking or ground  
30 motion, ground failure, landslides, liquefaction, subsidence and lateral spreading.

31  
32 Based on the certificate holder's literature review, no active landslides were identified within  
33 the proposed amended site boundary. However, during the ASC phase, evidence of landslides  
34 was previously identified within close proximity to the southern portion of the site boundary  
35 referred to as Wheatridge West, as represented in RFA4 Exhibit H Figure H-1. In RFA4, the  
36 certificate holder reiterates that the risk of landslides is low and that the basalt bedrock present  
37 within the amended site boundary is structurally competent and free of existing landslides.

38  
39 Non-seismic hazards within the analysis area include risks from volcanic activity from Mount  
40 Hood and Mount Adams, each located approximately 100 miles from the proposed amended  
41 site boundary. Most of the potential volcanic hazard impacts would occur within a 50-mile  
42 radius of the erupting volcano. Depending on the prevailing wind direction at the time of the  
43 eruption and the source of the eruption, ash fallout in the region surrounding the proposed

1 amended site boundary may occur. The certificate holder states, however, that the probability  
2 of volcanic activity impacting proposed RFA4 facility components is extremely unlikely.

3  
4 Non-seismic hazards within the analysis area also include risks from erosion and flooding. Based  
5 on the review of NRCS's 2018 Web Soil Survey, soils within the proposed amended site  
6 boundary range from moderate to high in susceptibility to erosion. Based on review of  
7 DOGAMI's Statewide Flood Hazard Database for Oregon – Federal Emergency Management  
8 Agency (FEMA) Flood Insurance Study inundation zones (DOGAMI 2017b) compared to the  
9 location of the proposed amended site boundary area, the proposed amended site boundary  
10 would not be within an identified FEMA 100-year or FEMA 500-year floodplain. Localized  
11 flooding could also occur from seasonal thunderstorms. Non-seismic hazards within the analysis  
12 area also include shrinking or swelling soils. However, the certificate holder asserts that there  
13 are no soils identified within the amended site boundary with potential for shrinking and swell  
14 (see RFA4 Exhibit I).

15 *Measures to Design Proposed RFA4 Facility Components to Avoid Seismic and Non-Seismic*  
16 *Hazards*

17  
18 The Structural Standard requires the Council to find that, based on an adequate  
19 characterization of the seismic risks of the site – as presented above, that the certificate holder  
20 demonstrates an ability to design, engineer and construct proposed RFA4 facility components  
21 to avoid potential seismic hazards and non-seismic hazards within the surrounding area.

22  
23 In RFA4 Exhibit H, the certificate holder provides an assessment of the maximum considered  
24 earthquake (MCE) ground motion to inform design parameters for proposed RFA4 facility  
25 components. Using the USGS Seismic Hazard Mapping Project – unified hazard tool analysis, the  
26 certificate holder conducted a probabilistic hazard analysis to evaluate ground motion. The  
27 analysis was based on a design event with a two-percent probability of exceedance in 50 years  
28 or a 2,475 year nominal recurrence period. The results of the assessment concluded that MCE  
29 peak ground acceleration (PGA) would be 0.1712 from gravity (g) at the bedrock surface and  
30 0.205g at ground surface.<sup>23</sup> This value of PGA on rock is an average representation of the  
31 acceleration most likely to occur within the amended site boundary for all seismic events  
32 (crustal, intraplate, or subduction).

33  
34 Based on the probabilistic hazard assessment, proposed RFA4 facility components would be  
35 designed in accordance with International Building Code (IBC) requirements including 0.1712g  
36 on bedrock and 0.205g at ground surface for Site Class C. The certificate holder describes that  
37 short period and 1-second spectral response acceleration of 0.465g and 0.252g for Site Class C  
38 may be used for design, but that final design would be informed by the pre-construction site-  
39 specific geotechnical investigation as required by previously imposed Structural Standard  
40 Condition 1 (PRE-SS-01). The certificate holder notes that because shallow bedrock formations  
41 exists at the site, design requirements for Site Class B may apply and would be determined  
42 based on compliance with Structural Standard Condition 1 (PRE-SS-01), which requires that the

---

<sup>23</sup> WRWAMD4Doc14-10 RFA4 Complete RFA4 Exhibit H. Geological Soil Stability Final, Section 7.2. 2019-07-01.

1 certificate holder review and assess potential seismic, geologic, and soil hazards of the facility  
2 site, in consultation with the Department and DOGAMI, through a pre-construction, site-  
3 specific geotechnical investigation. The certificate holder describes that compliance with  
4 Structural Standard Condition 4 (PRE-SS-03), previously imposed by Council, would also provide  
5 a final site-specific evaluation, prior to construction, of landslides within the surrounding area,  
6 and would utilize a combination of methods including LIDAR, remote sensing and field work.

7  
8 Proposed RFA4 facility components would be designed and engineered to meet the  
9 requirements of the zoning ordinances and building codes that establish flood protection  
10 standards for all construction, to avoid dangers to the infrastructure, as well as human safety  
11 and the environment, including criteria to ensure that the foundation will withstand flood  
12 forces. In addition, Council previously imposed Mandatory Condition 7 (GEN-GS-08), pursuant  
13 to OAR 345-025-0006(12), requiring that the certificate holder design, engineer and construct  
14 the facility to avoid dangers to human safety and the environment presented by seismic  
15 hazards affecting the site that are expected to result from all maximum probable seismic  
16 events.

17  
18 Moreover, Council previously imposed Structural Standard Condition 2 (GEN-SS-01) requiring  
19 that the certificate holder design, engineer and construct of the facility to comply with current  
20 structural and buildings codes. Existing Structural Standard Conditions 3, 4, and 5 (PRE-SS-02,  
21 PRE-SS-03, PRE-SS-04, respectively) require that the pre-construction site-specific geotechnical  
22 investigation report, required per Structural Standard Condition 1 (PRE-SS-01), include an  
23 investigation of potentially active faults, slope instability and landslide hazards, swell and  
24 collapse potential. These conditions ensure that the pre-construction site-specific geotechnical  
25 investigation evaluate the potential seismic and non-seismic risks to the facility and identify any  
26 additional mitigation that would be undertaken to safely design, construct, and operate the  
27 facility. Additionally, existing Soil Protection Condition 1 (CON-SP-01) requires that the  
28 certificate holder conduct all construction activities in compliance with best management  
29 practices of an Erosion and Sediment Control Plan to reduce and mitigate erosion and  
30 sedimentation, as discussed further in Section III.D *Soil Protection* of this order.

### 31 32 *Disaster Resilience and Climate Change Adaptation*

33  
34 OAR 345-021-0010(1)(h)(E) and OAR 345-021-0010(1)(h)(F)(i) require the certificate holder to  
35 discuss disaster resilience of proposed RFA4 facility components (with respect to seismic  
36 hazards and non-seismic geologic hazards, respectively) and OAR 345-021-0010(1)(h)(F)(ii)  
37 requires the certificate holder to discuss the impacts of future climate conditions on the  
38 proposed facility modifications.

39  
40 To address disaster resilience, the certificate holder proposes to design proposed RFA4 facility  
41 components to meet or exceed the minimum standards required by the latest IBC, Oregon  
42 Structural Specialty Code, and building codes adopted by the State of Oregon at the time of

1 construction.<sup>24</sup> A qualified engineer would assess and review the seismic, geologic, and soil  
2 hazards associated with the construction of proposed RFA4 facility components. Construction  
3 requirements would be modified, as needed, based on the site-specific characterization of  
4 seismic, geologic, and soil hazards. Proposed RFA4 facility components would be designed,  
5 engineered, and constructed to meet all current standards to adequately avoid potential  
6 dangers to human safety presented by seismic hazards. The certificate holder underscores that  
7 proposed RFA4 facility components would be generally unmanned, and located in a sparsely  
8 populated area; therefore, the risks to human safety and the environment due to seismic  
9 hazards would be minimal. Nonetheless, the certificate holder provides an example emergency  
10 action plan for a solar facility to demonstrate the actions and response measures that would  
11 occur in the event of a severe weather event or fire.

12  
13 Based upon the analysis presented above and subject to compliance with existing conditions,  
14 the Council finds that the certificate holder has adequately characterized the potential seismic,  
15 geologic and soil hazards within the proposed amended site boundary area and its vicinity, and  
16 that the certificate holder maintains the ability to design, engineer, and construct proposed  
17 RFA4 facility components to avoid dangers to human safety presented by the identified  
18 hazards.

#### 19 20 **Conclusions of Law**

21  
22 Based on the foregoing analysis, and subject to the existing conditions in the site certificate, the  
23 Council finds that the proposed RFA4 facility components would comply with the Council's  
24 Structural Standard.

#### 25 26 **III.D. Soil Protection: OAR 345-022-0022**

27  
28 *To issue a site certificate, the Council must find that the design, construction and*  
29 *operation of the facility, taking into account mitigation, are not likely to result in a*  
30 *significant adverse impact to soils including, but not limited to, erosion and chemical*  
31 *factors such as salt deposition from cooling towers, land application of liquid effluent,*  
32 *and chemical spills.*

#### 33 34 **Findings of Fact**

35  
36 The Soil Protection standard requires the Council to find that, taking into account mitigation,  
37 the design, construction and operation of a facility or proposed amendment would not be likely  
38 to result in a significant adverse impact to soils.

39  
40 The analysis area for potential impacts to soils, as defined in the Project Order, is the area  
41 within the site boundary, and for this amendment request includes the area within the

---

<sup>24</sup> WRWAMD4Doc14-10 RFA4 Complete RFA4 Exhibit H. Geological Soil Stability Final, Section 9.0. 2019-07-01.

1 proposed amended site boundary. Land uses within the analysis area include private agriculture  
2 generally used for dryland wheat production or rangeland.

3  
4 *Potential Significant Adverse Impacts to Soil*

5  
6 Potential impacts to soils within the analysis area (site boundary) could occur during  
7 construction and operation of proposed RFA4 facility components from wind or water erosion,  
8 compaction, changes in drainage patterns, or spills or releases of chemicals or other liquid  
9 materials, as evaluated in Council's *Final Order on ASC*.

10  
11 Erosion control measures would be implemented during construction in accordance with  
12 previously imposed Soil Protection Conditions 1 and 2 (CON-SP-01 and CON-SP-02). Soil  
13 Protection Conditions 1 and 2 require the certificate holder to, during construction, implement  
14 erosion and sediment control measures and best management practices in accordance with the  
15 DEQ-approved National Pollutant Discharge Elimination System Construction Stormwater  
16 Discharge General Permit (NPDES) 1200-C. Council previously imposed Soil Protection Condition  
17 6 (OPR-SP-01) requiring the certificate holder to, during operations, implement and maintain  
18 erosion and sediment control measures and restrict vehicular use and maintenance activities to  
19 constructed access roads in order to avoid unnecessary erosion or spill risk. The Council finds  
20 that based upon compliance with existing conditions, potential soil erosion impacts during  
21 construction and operation would not likely be significant or adverse.

22  
23 Based on the foregoing analysis, the Council finds that compliance with existing conditions  
24 would minimize the potential for adverse impacts to soil during construction and operation of  
25 proposed RFA4 facility components.

26  
27 **Conclusions of Law**

28  
29 Based on the foregoing findings of fact and conclusions of law, and subject to compliance with  
30 existing site certificate conditions, the Council finds that proposed RFA4 facility components  
31 would continue to comply with the Council's Soil Protection standard.

32  
33 **III.E. Land Use: OAR 345-022-0030**

34  
35 *(1) To issue a site certificate, the Council must find that the proposed facility complies*  
36 *with the statewide planning goals adopted by the Land Conservation and*  
37 *Development Commission.*

38  
39 *(2) The Council shall find that a proposed facility complies with section (1) if:*

40  
41 *(a) The applicant elects to obtain local land use approvals under ORS 469.504(1)(a)*  
42 *and the Council finds that the facility has received local land use approval under*  
43 *the acknowledged comprehensive plan and land use regulations of the affected*  
44 *local government; or*

(b) *The applicant elects to obtain a Council determination under ORS 469.504(1)(b) and the Council determines that:*

(A) *The proposed facility complies with applicable substantive criteria as described in section (3) and the facility complies with any Land Conservation and Development Commission administrative rules and goals and any land use statutes directly applicable to the facility under ORS 197.646(3);*

(B) *For a proposed facility that does not comply with one or more of the applicable substantive criteria as described in section (3), the facility otherwise complies with the statewide planning goals or an exception to any applicable statewide planning goal is justified under section (4); or*

(C) *For a proposed facility that the Council decides, under sections (3) or (6), to evaluate against the statewide planning goals, the proposed facility complies with the applicable statewide planning goals or that an exception to any applicable statewide planning goal is justified under section (4).*

\*\*\*

(4) *The Council may find goal compliance for a proposed facility that does not otherwise comply with one or more statewide planning goals by taking an exception to the applicable goal. Notwithstanding the requirements of ORS 197.732, the statewide planning goal pertaining to the exception process or any rules of the Land Conservation and Development Commission pertaining to the exception process, the Council may take an exception to a goal if the Council finds:*

(a) *The land subject to the exception is physically developed to the extent that the land is no longer available for uses allowed by the applicable goal;*

(b) *The land subject to the exception is irrevocably committed as described by the rules of the Land Conservation and Development Commission to uses not allowed by the applicable goal because existing adjacent uses and other relevant factors make uses allowed by the applicable goal impracticable; or*

(c) *The following standards are met:*

(A) *Reasons justify why the state policy embodied in the applicable goal should not apply;*

(B) *The significant environmental, economic, social and energy consequences anticipated as a result of the proposed facility have been identified and adverse impacts will be mitigated in accordance with rules of the Council applicable to the siting of the proposed facility; and*

(C) *The proposed facility is compatible with other adjacent uses or will be made compatible through measures designed to reduce adverse impacts.*

\*\*\*

### **Findings of Fact**



1 The Land Use standard requires the Council to find that construction and operation of proposed  
2 RFA4 facility components complies with the statewide planning goals adopted by the Land  
3 Conservation and Development Commission (LCDC).<sup>25</sup> The certificate holder has chosen to  
4 demonstrate compliance with the Land Use standard via a Council determination on  
5 compliance with the local applicable substantive criteria as described in OAR 345-022-  
6 0030(2)(b).

7  
8 The analysis area for potential land use impacts, as defined in the Project Order, is the area  
9 within and extending ½-mile from the site boundary. RFA4 proposes to expand the site  
10 boundary; therefore, the analysis area includes the area within and extending ½-mile from the  
11 proposed amended site boundary, but for this amendment request focuses on the area within  
12 and extending ½-mile from proposed RFA4 facility component locations which would be limited  
13 to area within Morrow County.<sup>26</sup>

### 14 15 III.E.I. Local Applicable Substantive Criteria

16  
17 On November 2, 2012, during the review of the ASC, the Council appointed the Umatilla County  
18 Board of Commissioners and Morrow County Board of Commissioners as the Special Advisory  
19 Group (SAG) for the facility. On behalf of and as authorized by the SAG, Morrow and Umatilla  
20 County Planning Directors identified applicable substantive criteria to be considered during the  
21 ASC phase and through subsequent amendment requests have identified changes in local codes  
22 to be considered applicable substantive criteria. Applicable substantive criteria are those in  
23 effect on the date the certificate holder submitted to the Department pRFA4, which occurred  
24 on November 30, 2018. Proposed RFA4 facility components would be located entirely within  
25 Morrow County; therefore, the Department coordinated review of pRFA4 with Morrow County  
26 Planning Department on behalf of Morrow County Board of Commissioners. Comments  
27 received on pRFA4 from Morrow County are addressed in RFA4 and in this order and are  
28 provided as Attachment B of this order.

29  
30 The applicable substantive criteria for proposed RFA4 facility components are presented in  
31 Table 1, *Morrow County Applicable Substantive Criteria* below. As described above, while the  
32 facility, as approved, would be located within Morrow and Umatilla County, proposed RFA4  
33 facility components would be located entirely within Morrow County. Therefore, for this  
34 amendment request, substantive criteria from Umatilla County Development Code and  
35 Comprehensive Plan do not apply.

---

<sup>25</sup> The Council must apply the Land Use standard in conformance with the requirements of ORS 469.504.

<sup>26</sup> Also noted in the Project Order, the certificate holder must assess potential impacts beyond the analysis area if there are identified resources, such as a protected Goal 5 resource, that could result in significant adverse impacts, direct or indirect, from the facility or a proposed change to a facility. The certificate holder has not identified potential resources outside of the analysis area for which this would apply; however, this information is provided to inform the reviewer of the certificate holder's obligation to evaluate potential impacts if resources are identified during the RFA4 review process.

**Table 1: Morrow County Applicable Substantive Criteria**

<b>Morrow County Zoning Ordinance (MCZO)<sup>1,2,3</sup></b>	
<i>Article 1 – Introductory Provisions</i>	
Section 1.050	Zoning Permit
<i>Article 3 – Use Zones</i>	
Section 3.010	Exclusive Farm Use, EFU Zone
Section C	Conditional Uses
Section M	Yards
Section N	Transportation Impacts
<i>Article 6 – Conditional Uses</i>	
Section 6.020	General Criteria
Section 6.025	Resource Zone Standards for Approval
Section 6.030	General Conditions
Section 6.040	Permits and Improvements Assurance
<b>Morrow County Comprehensive Plan (MCCP)</b>	
Agricultural Lands Element - Policies 1 and 4	
Energy Conservation Element – Policies 2, 3 and 9	
Economic Element - Policies 2A	
Chapter 19 – Review and Revisions	
Notes: 1. In RFA4 Exhibit K, the certificate holder asserts that proposed RFA4 facility components would not be located within a Significant Resource Overlay Zone and affirms that there are no structures or sites listed in MCCP inventory of significant historic resources within the proposed new site boundary area. Therefore, MCCP Section 3.200 and 3.300 would not apply. The certificate holder also describes that construction and operation of proposed RFA4 facility components would not result in new lots or parcels; therefore, MCZO Section 3.010.L is not identified in this table as applicable. 2. RFA4 Exhibit K identifies MCZO Article 4 and Article 8 as applicable substantive criteria. MCZO Article 4 provisions have not been included in this table, as Article 4 contains ministerial reviews for site plans and access (road, utility) permits to be conducted and issued directly by the county. MCZO Article 8 provisions have not been included in this table as the Council interprets the amendment provisions to apply to requests for re-zoning or of the zoning ordinance, not amendments to site certificates or conditional use permits. 3. MCZO Section 6.025 establishes standards for conditional uses; however, it does not include specific standards for the land use category applied to proposed RFA4 facility components and therefore is not included in this table.	

1  
2 The certificate holder assesses proposed RFA4 facility components in Morrow County’s  
3 designated Exclusive Farm Use (EFU) zone as “photovoltaic solar power generation facilities as  
4 commercial utility facilities for the purpose of generating power for public use by sale subject to  
5 Subsection K.3” under Morrow County Zoning Ordinance (MCZO) Section 3.010.<sup>27</sup> Proposed  
6 RFA4 facility components include proposed solar module blocks (each consisting of: solar  
7 modules, trackers, racks, posts, cabling, inverters, and transformers); above- and belowground  
8 34.5 kV electrical collection system; Wheatridge West collector substation expansion; 41

<sup>27</sup> WRWAMD4Doc14-13 RFA4 Complete RFA4 Exhibit K. Land Use Final, Section 5.2.2. 2019-07-01.

distributed energy storage system (battery) sites; private access road; service roads, gates, and security fence.

The following analysis addresses the applicable substantive criteria from MCZO for uses within EFU-zoned land.

MCZO Section 1.050 Introductory Provisions, Zoning Permit

*Prior to the construction, reconstruction, alteration, or change of use of any structure larger than 100 square feet or use for which a zoning permit is required, a zoning permit for such construction, reconstruction, alteration, or change of use or uses shall be obtained from the Planning Director or authorized agent thereof. A zoning permit shall become void after 1 year unless the development action has commenced. A 12-month extension may be granted when submitted to the Planning Department prior to the expiration of the approval period.*

MCZO Section 1.050 requires projects larger than 100 square feet, including the construction, reconstruction, alteration or change of use of any structure, or use for which a zoning permit is required, to obtain a zoning permit. A zoning permit, as described in Article 1, is issued prior to a building permit, or prior to commencement of a use subject to administrative review, and states that the proposed use be in accordance with requirements of the corresponding land use zone, as further evaluated below.

The construction and operation of proposed RFA4 facility components would alter or change the existing land use by more than 100 square feet. Therefore, the certificate holder would be required to obtain a zoning permit, which would be subject to administrative review under the provisions of MCZO Article 4.165.<sup>28</sup> Council previously imposed Land Use Condition 3 (PRE-LU-01) requiring that, prior to construction, the certificate holder obtain all zoning and building permits necessary for all facility components within Morrow County, which would apply to proposed RFA4 facility components.<sup>29</sup>

Based upon compliance with Land Use Condition 3 (PRE-LU-01), the Council finds that the certificate holder would satisfy the MCZO Section 1.050 provision.

MCZO Section 3.010 Exclusive Farm Use, EFU Zone

*Section 3.010.C. CONDITIONAL USES PERMITTED.*

---

<sup>28</sup> MCZO Article 4 provisions are ministerial requirements to be conducted directly by the county and therefore are not included in this order as Council is not required to make findings of compliance on ministerial requirements.

<sup>29</sup> WRWAMD4. DPO Special Advisory Group Comments McLane. 2019-09-06. In comments on the draft proposed order, the SAG commented that the zoning permit would apply to the proposed 7-8 perimeter fence. Because the previously imposed condition indicates that a zoning permit is required for "all" facility components, clarification is provided in this order but further amendment to the previously imposed condition was considered unnecessary.

1        *The following uses are permitted subject to county review, any specific standards for the use*  
2        *set forth in Section D, Article 6, the general standards for the zone, and any other applicable*  
3        *standards and review process in the ordinance:*

4  
5        *24. Photovoltaic solar power generation facilities as commercial utility facilities for the*  
6        *purpose of generating power for public use by sale subject to Subsection K.3*

7  
8        MCZO Section 3.010.C. applies to conditionally permitted uses within EFU-zoned land, subject  
9        to specific standards set forth in MCZO Article 3 Section 3.010.D, Article 6, general standards  
10       and any other applicable standards. MCZO Section 3.010.C.24 identifies “photovoltaic solar  
11       power generation facilities as commercial utility facilities for the purpose of generating power  
12       for public use by sale subject to Subsection K.3” (photovoltaic solar power generation facilities)  
13       as a conditionally permitted use in EFU-zoned land. MCZO Section 3.010.C.24 identifies that  
14       uses evaluated under the photovoltaic solar power generation facility land use category would  
15       be subject to MCZO Section 3.010.K, and any other applicable standards which the certificate  
16       holder identifies as MCZO Section 3.010.L through N.

17  
18       Proposed RFA4 facility components include photovoltaic solar power generation equipment  
19       comprised of solar modules, tracker systems, posts, electrical equipment, overhead and buried  
20       conduit, inverters, combiners, transformers, 34.5 kV interconnection electrical lines, internal  
21       private service roads and gates, distributed energy storage system sites and expansion of  
22       Wheatridge West collector substation to interconnect and transmit energy from the proposed  
23       energy components.

24  
25       Based on the MCZO Section 3.010.K.3(e) definition of a photovoltaic solar power generation  
26       facility, which mirrors the definition provided in Oregon’s Land Conservation and Development  
27       Commission’s (LCDC) OAR 660-033-0130(38)(f), the Council evaluates proposed RFA4 facility  
28       components under the land use category established for photovoltaic solar power generation  
29       facilities. The requirements established under MCZO Section 3.010.K.3 for photovoltaic solar  
30       power generation facilities mirrored LCDC’s state rules established under OAR 660-033-  
31       0130(38), until May 23, 2019 when LCDC’s amended OAR 660-033-0130(38) rule requirements  
32       became effective. Morrow County has not amended MCZO Section 3.010.K.3 to reflect LCDC’s  
33       2019 OAR 660-033-0130(38) rule amendment. Because some of the applicable OAR 660-033-  
34       0130(38) provisions conflict with the local code provisions, the local code requirements are  
35       then inconsistent with the amended OAR 660-033-0130(38) rules for a photovoltaic solar power  
36       generation facility. Accordingly, the Council is not required to apply both the current OAR 660-  
37       033-0130(38) rules and the local code, and instead must only apply the OAR 660-033-0130(38)  
38       rules to the proposed RFA4 photovoltaic solar power generation components. The Council’s  
39       evaluation of the certificate holder’s compliance with OAR 660-033-0130(38) requirements is  
40       provided in Section III.E.2 *Directly Applicable State Rules* of this order.

41  
42       *Section 3.010.M Yards. In an EFU Zone, the minimum yard setback requirements shall*  
43       *be as follows:*

- 1       1. *The front yard setback from the property line shall be 20 feet for property*  
2       *fronting on a local minor collector or marginal access street ROW, 30 feet*  
3       *from a property line fronting on a major collector ROW, and 80 feet from an*  
4       *arterial ROW unless other provisions for combining accesses are provided and*  
5       *approved by the County.*  
6  
7       2. *Each side yard shall be a minimum of 20 feet except that on corner lots or*  
8       *parcels the side yard on the street side shall be a minimum of 30 feet.*  
9  
10      3. *Rear yards shall be a minimum of 25 feet,.*  
11  
12      4. *Stream Setback. All sewage disposal installations such as outhouses, septic*  
13      *tank and drainfield systems shall be set back from the high-water line or mark*  
14      *along all streams and lakes a minimum of 100 feet, measured at right angles*  
15      *to the high-water line or mark. All structures, buildings, or similar permanent*  
16      *fixtures shall be set back from the high-water line or mark along all streams or*  
17      *lakes a minimum of 100 feet measured at right angles to the high-water line*  
18      *or mark.*

19  
20 MCZO Section 3.010.M(1) establishes minimum front yard setback requirements of 80, 30,  
21 and 20 feet from a road (arterial, major collector, and local minor collector, respectively)  
22 right-of-way. MCZO Section 3.010.M(2) establishes minimum side yard setback  
23 requirements of 20 feet, and 30 feet when on street side corner lots. MCZO Section  
24 3.010.M(3) establishes a minimum 25-foot rear yard setback requirement and 100-foot  
25 setback from sewage installations to the high-water line or mark along streams and lakes.  
26 Proposed RFA4 facility components would not include sewage installations and therefore  
27 MCZO Section 3.010.M(3) would not apply.  
28

29 In RFA4 Exhibit K, the certificate holder identifies arterial, minor and major collector roads in  
30 proximity to the proposed new site boundary area. Specific roads identified include Juniper  
31 Canyon Road (minor collector), Bombing Range Road (major) and Highway 207 (minor arterial).  
32 Road designations are identified in Morrow County's 2012 Transportation Plan.<sup>30</sup> Based on  
33 Morrow County's road designation for arterial, minor and major collector roads, the certificate  
34 holder shall ensure that proposed RFA4 facility components are designed to comply with MCZO  
35 Section 3.010.M setback requirements. To ensure that the siting and design of proposed RFA4  
36 facility components comply with MCZO Section 3.010.M, the Council amends Land Use  
37 Condition 1 (GEN-LU-01) as follows:<sup>31</sup>  
38

---

<sup>30</sup> Morrow County's 2012 Transportation Plan available at:

[https://www.co.morrow.or.us/sites/default/files/fileattachments/planning/page/10811/tsp\\_complete\\_document.pdf](https://www.co.morrow.or.us/sites/default/files/fileattachments/planning/page/10811/tsp_complete_document.pdf).

<sup>31</sup> SRWAMD4. Special Advisory Group Comment. Morrow County Board of Commissioners. 2019-09-06. The Morrow County Board of Commissioners, on behalf of Carla McLane, Morrow County Planning Director, as the SAG

**Amended Land Use Condition 1 (GEN-LU-01):** The certificate holder shall design the facility to comply with the following ~~wind turbine~~ setback distances in Morrow County:

- 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.
- b. Wind turbines shall be setback 100 feet from all property boundaries, including participant property boundaries within the site boundary, if practicable.
- c. Wind turbine foundations shall not be located on any property boundary, including participant property boundaries within the site boundary.
- 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.
- e. 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.
- f. East and west sides 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.
- g. North side of perimeter fenceline of solar facility components shall be setback a minimum of 25 feet.

[Final Order on ASC; Land Use Condition 1; AMD3; AMD4]

Based on compliance with amended Land Use Condition 1 (GEN-LU-01), the Council finds that proposed RFA4 facility components would satisfy MCZO Section 3.010.M setback requirements.

*Section 3.010.N. Transportation Impacts*

1. *Traffic Impact Analysis (TIA). In addition to the other standards and conditions set forth in this section, a TIA will be required for all projects generating more than 400 passenger car equivalent trips per day. Heavy vehicles – trucks, recreational vehicles and buses – will be defined as 2.2 passenger car equivalents. A TIA will include: trips generated by the project, trip distribution for the project, identification of intersections for which the project adds 30 or more peak hour passenger car equivalent trips, and level of service assessment, impacts of the project, and, mitigation of the impacts. If the corridor is a State Highway, use ODOT standards. (MC-C-8-98)*

---

appointed for the facility, commented on the Department's analysis of Morrow County Zoning Ordinance (MCZO) Section 3.010 Yard Setbacks for conditionally permitted uses in Exclusive Farm Use (EFU) zoned land and recommended that yard setbacks not apply to the perimeter fenceline but to proposed facility structures, which the Department agreed and recommended by amended condition in the proposed order.

MCZO Section 3.010.N applies to projects that would generate more than 400 passenger equivalent trips per day and requires such project to conduct a Traffic Impact Assessment (TIA) to reduce potential project related traffic impacts on local roadway systems. In RFA4 Exhibit U, the certificate holder explains that construction of proposed RFA4 facility components would not result in more than 250 workers and that construction of the previously approved wind facility and proposed solar facility components would not be expected to overlap, or that if there were overlapping construction activities, estimated daily passenger car equivalents would not result in greater impacts than those evaluated in the *Final Order on the ASC* – which evaluated impacts from up to 360 workers per day. The certificate holder further asserts in RFA4 Exhibit K that traffic generated during construction of proposed RFA4 facility components is not anticipated to generate more than 400 passenger car equivalents per day. Therefore, based on estimated construction-related traffic, the Council finds that the certificate holder is not required to prepare a TIA to satisfy the requirements of Section 3.010.N during construction of proposed RFA4 facility components.

Council previously imposed Public Services Condition 7 (PRE-PS-02) and Land Use Condition 13 (PRE-LU-06) requiring that, prior to construction, the certificate holder execute a road use agreement with Morrow County Department of Public Works and develop and implement a construction-related Traffic Management Plan, to mitigate for and reduce potential traffic- and transportation related impacts within Morrow County. These conditions would apply to the proposed RFA4 facility components.

Long-term operational traffic would generate approximately 2 passenger car or pickup truck trips per day, with infrequent heavy vehicle trips and would not trigger the requirements of Section 3.010.N. Based on estimated operational traffic, the Council concludes that the certificate holder is not required to satisfy the requirements of Section 3.010.N.

#### MCZO Article 6 Conditional Uses

##### *Section 6.020 General Criteria*

*In judging whether or not a conditional use proposal shall be approved or denied, the Commission shall weigh the proposal's appropriateness and desirability, or the public convenience or necessity to be served against any adverse conditions that would result from authorizing the particular development at the location proposed and, to approve such use, shall find that the following criteria are either met or can be met by observance of conditions.*

- A. The proposal will be consistent with the Comprehensive Plan and the objectives of the Zoning Ordinance and other applicable policies and regulations of the County.*
- B. If located within the Urban Growth Boundary of a city, that said city has had an opportunity to review and comment on the subject proposal.*

1        *C. The proposal will not exceed carrying capacities of natural resources or public facilities.*

2  
3        MCZO Section 6.020 establishes a requirement for the governing body to weigh the  
4        appropriateness and desirability, or the public convenience or necessity to be served, against  
5        any adverse conditions that would result from authorizing the particular development at the  
6        location proposed. Based on the findings of fact and conclusions of law presented in this order,  
7        that because proposed RFA4 facility components would provide a desirable, renewable energy  
8        source (solar), and because the proposed site provides reasonable access to the existing  
9        regional grid, and based upon compliance with existing, new and amended site certificate  
10       conditions, that the appropriateness and desirability of proposed RFA4 facility components  
11       would outweigh any adverse conditions resulting from the proposed facility modifications. In  
12       addition, the Council refers to the evaluation of the MCZO Section 6.020.A – C criteria below to  
13       support the evaluation of the appropriateness and desirability against any potential adverse  
14       conditions resulting from construction and operation of proposed RFA4 facility components.  
15

16       MCZO Section 6.020.A requires that conditional use permit applications establish compliance  
17       with the MCCP, MCZO and other applicable policies and regulations of the county. Compliance  
18       with the MCCP provisions is discussed below. Compliance with zoning ordinance and other  
19       county policies and regulations is discussed throughout this section. Therefore, the Council  
20       finds that this criterion is satisfied upon a determination that the proposed RFA4 facility  
21       components satisfy the identified applicable substantive criteria.  
22

23       MCZO Section 6.020.B applies to conditional use permit applications within an urban growth  
24       boundary. Proposed RFA4 facility components would not be located within the urban growth  
25       boundary and therefore this criterion would not apply. MCZO Section 6.020.C requires that the  
26       proposed RFA4 facility components not exceed carrying capacities of natural resources or  
27       public facilities. MCZO Section 1.030 defines “carrying capacity” as the “level of uses that can be  
28       accommodated and continued without irreversible impairment of natural resources  
29       productivity, the ecosystem, and the quality of air, land and water resources.” Potential impacts  
30       from construction and operation of proposed RFA4 facility components to public services is  
31       addressed in RFA4 Exhibit U. Those impacts are evaluated and addressed in Section III.M, *Public*  
32       *Services* of this order. As discussed in that section, the Council finds that, with implementation  
33       of mitigation measures previously imposed as site certificate conditions, construction and  
34       operation of proposed RFA4 facility components would not be likely to result in a significant  
35       adverse impact to the ability of service providers to provide the necessary services.  
36

37       Potential impacts to soils, surface or groundwater resources, and protected plant and animal  
38       species and their habitats are evaluated in RFA4 Exhibits I, J, O, P and Q. Because proposed RFA4  
39       facility components would not include operational emission-generating equipment (criteria  
40       pollutants or greenhouse gas emissions), the proposed facility modification would not result in  
41       potential adverse air quality or emissions-related climate change impacts. The Council’s findings  
42       of fact and conclusions of law based on an evaluation of those impacts in Sections III.D, *Soil*  
43       *Protection*, III.H, *Fish and Wildlife Habitat*, III.I, *Threatened and Endangered Species*, III.Q.2,  
44       *Removal-Fill Law*, and III.Q.3, *Water Rights* of this order. As discussed in the relevant sections,



the Council finds, subject to compliance with existing, new and amended conditions, requirements of Council standards and other applicable rules would be satisfied. The identified sections also support a finding that, with the imposition of the conditions, the proposed RFA4 facility components not exceed the carrying capacities of Morrow County natural resources. Therefore, the Council finds that with existing, new and amended conditions the proposed RFA4 facility components would comply with MCZO Sections 6.020.A, B and C.

*Section 6.025 Resource Zone Standards for Approval*

A. *In the Exclusive Farm Use zone a conditional use may be approved only when the County finds that the use will not:*

1. *Force a significant change in accepted farm or forest practices on surrounding lands devoted to farm or forest use; or*
2. *Significantly increase the cost of accepted farm or forest practices on surrounding lands devoted to farm or forest use.*

\*\*\*

MCZO Section 6.025.A(1) and (2) establish approval standards for all conditional uses within EFU zoned land. The approval standards require a demonstration that the proposed use would not force a significant change in accepted farm or forest practices, nor significantly increase the cost of accepted farm or forest practices. The certificate holder confirms that there are no forest uses or practices within the land use analysis area. Therefore, the compliance assessment under MCZO Section 6.025.A(1) and (2) addresses potential impacts to accepted farm practices and surrounding lands devoted to farm use.<sup>32</sup>

*Accepted Farm Practices on Surrounding Lands*

As presented in RFA4 Exhibit K, surrounding lands devoted to farm use are used primarily for cultivation of Winter wheat and related accessory uses; or due to slope or other topographical

---

<sup>32</sup> The Morrow County conditional use standards are taken directly from ORS 215.296. Pursuant to ORS 215.203(2)(a) "farm use" means "the current employment of land for the primary purpose of obtaining a profit in money by raising, harvesting and selling crops or the feeding, breeding, management and sale of, or the produce of, livestock, poultry, fur-bearing animals or honeybees or for dairying and the sale of dairy products or any other agricultural or horticultural use or animal husbandry or any combination thereof." "Farm use" includes the preparation, storage and disposal by marketing or otherwise of the products or by-products raised on such land for human or animal use. "Farm use" also includes the current employment of land for the primary purpose of obtaining a profit in money by stabling or training equines including but not limited to providing riding lessons, training clinics and schooling shows. "Farm use" also includes the propagation, cultivation, maintenance and harvesting of aquatic, bird and animal species that are under the jurisdiction of the State Fish and Wildlife Commission, to the extent allowed by the rules adopted by the commission. "Farm use" includes the on-site construction and maintenance of equipment and facilities used for the activities described in this subsection. "Farm use" does not include the use of land subject to the provisions of ORS chapter 321, except land used exclusively for growing cultured Christmas trees as defined in subsection (3) of this section or land described in ORS 321.267 (3) or 321.824 (3)."

1 features that make the land unsuitable for farming, other uses include grassland or lands  
2 managed under the State's Conservation Reserve Program (CRP).

3  
4 Accepted Winter wheat farm practices on surrounding lands include weed control, field  
5 preparation, seed bed preparation, fertilization, and seeding or planting of the crop. Some  
6 farmers may use helicopters and/or airplanes to aerially apply chemicals to a crop rather than  
7 using traditional ground-based equipment for application. Wheat farmers use a variety of  
8 ground-based equipment which are predominately less than 15 feet tall including tractors,  
9 plows, discs, fertilizer/pesticide applicators, combine harvesters, and other heavy machinery.  
10 However, certain implements, accessories, booms, or antennas may extend to heights greater  
11 than 15 feet during normal operation, which would not be expected to experience clearance  
12 impacts from the aboveground collector lines strung on 60-foot monopole structures with a  
13 minimum aboveground clearance of 25 feet. Agricultural fields are accessed by a network of  
14 public and private roads. Farm machinery is commonly driven on public roads between farms,  
15 while private roads and tracks provide access within properties and around fields. Some of  
16 these private access ways are fairly well developed roads, paved or graded gravel while others  
17 are rough two-track dirt paths.

18  
19 As presented in RFA4 Exhibit K Table K-1, there are no irrigated agricultural uses within the  
20 proposed new site boundary area, with the closest irrigated agricultural lands located at ½-mile  
21 or greater. However, as presented in RFA4 Exhibit K Figure K-3, there is an area east of Bombing  
22 Range Road within the eastern portion of the proposed new site boundary area that maintains  
23 a junior water right (Water Right Permit G5092 and Certificate 62326). The water right  
24 authorizes irrigation for agricultural uses from the basalt groundwater reservoir. However,  
25 since 1986, the basalt groundwater reservoir has been a designated critical groundwater area  
26 (i.e. Butter Creek Critical Ground Water Area), where due to sustained declines in ground water  
27 availability for the last 30 years, withdrawal allocations have been restricted to promote  
28 optimum use of the limited reservoir groundwater supply to stabilize water levels. In RFA4  
29 Exhibit K, the certificate holder asserts that new applications for appropriation of water from  
30 the basalt groundwater reservoir within the Butter Creek Critical Area are not permitted.

31  
32 The Department and the certificate holder contacted Oregon Water Resources Department on  
33 July 18, 2019 and December 6, 2018, respectively, to confirm the status of the junior water  
34 right (Water Right Permit G5092 and Certificate 62326) and likelihood of future water  
35 allocation under this water right for irrigated agriculture. Both communications confirmed that  
36 because the water right applies within the Butter Creek Critical Ground Water Area, where  
37 annual sustainability yields have been declining for the last 30 years, and water allocation has  
38 been precluded for the last 14 years (i.e. Oregon Water Resources Department issued orders to  
39 the water right holder prohibiting water allocation for the last 14 years) – and last used in 1992  
40 – use of the water right is highly unlikely for the foreseeable future. Therefore, for purposes of  
41 this analysis, the Council evaluates potential impacts to accepted farm practices on  
42 surrounding farm lands based on non-irrigated farm practices. In RFA4 Exhibit K, the certificate  
43 holder also confirms that alternate means of irrigation from the Columbia, Umatilla, and Butter  
44 Creek surface water resources would be unlikely in the area covered under the water right due

1 to the distance from the new site boundary area to these water resources and the associated  
2 cost of pumping water.

3  
4 Surrounding lands devoted to agricultural use but not cultivated for Winter wheat include  
5 rangeland, pastureland, and certain other lands. These lands are referred to as grasslands,  
6 some of which are designated CRP Grasslands and part of the CRP program, a federally funded  
7 voluntary program that contracts with agricultural producers so that environmentally sensitive  
8 agricultural land is not farmed or ranched, but instead used for conservation benefits.

9  
10 *Potential Impacts from Proposed RFA4 Facility Components to Accepted Farm Practices and*  
11 *Cost of Farm Practices*

12  
13 Potential construction-related impacts to accepted farm practices and the cost of farm  
14 practices on surrounding lands within the proposed amended site boundary area could include  
15 changes in field access routes; changes in patterns of cultivation, seeding, fertilizing and  
16 harvesting; erosion and compaction; dust-generation and weed dispersal. Potential impacts to  
17 accepted farm practices on surrounding lands during operation of proposed RFA4 facility  
18 components could include erosion, compaction and dust generation. The certificate holder  
19 relies upon compliance with previously imposed conditions to demonstrate that these potential  
20 impacts would be less than significant, as summarized below and presented in Attachment A,  
21 Draft Amended Site Certificate, of this order.

- 22  
23 • Land Use Condition 6 (PRE-LU-03) requires that, during construction and operation, the  
24 certificate holder implement a Weed Control Plan, as approved by the Department in  
25 consultation with the county and ODFW.  
26 • Land Use Condition 7 (PRE-LU-04) requires that, prior to construction, the certificate  
27 holder record a covenant not to sue with the county to allow for future farming  
28 practices to continue on adjacent lands.  
29 • Land Use Condition 11 (GEN-LU-04) requires that the certificate holder design and  
30 construct the facility using the minimum land necessary for construction and operation.  
31 • Land Use Condition 12 (PRE-LU-05) requires that, prior to construction, the certificate  
32 holder consult with surrounding landowners and lessees on facility component location  
33 to minimum adverse impacts to farm practices on surrounding lands. The condition  
34 further requires that the certificate holder provide evidence of such consultation to the  
35 Department and the county.  
36 • Scenic Resources Condition 2 (GEN-SR-02) requires that, during construction, the  
37 certificate holder utilize dust control measures on access roads and areas of disturbance  
38 to minimize generation of airborne dust.  
39 • Soil Protection Condition 1 (CON-SP-01) and Soil Protection Condition 2 (CON-SP-02)  
40 requires that, during construction, erosion and sediment control measures be  
41 implemented.  
42 • Fish and Wildlife Habitat Condition 11 (PRE-FW-05) requires that, during construction  
43 and operation, the certificate holder implement a Revegetation Plan, as approved by the

Department in consultation with ODFW, which includes measures for topsoil management and decompaction.

In RFA4 Exhibit K, the certificate holder identifies that potential impacts to accepted farm practices on surrounding lands could include changes in field access routes; and, changes in patterns of cultivation, seeding, fertilizing and harvesting. Because a Goal 3 exception is requested for proposed RFA4 facility components and to ensure that other potential impacts to accepted farm practices are avoided or minimized to the fullest extent feasible, the Council amends previously imposed Land Use Condition 11 (GEN-LU-04) for further clarification of the certificate holder's obligation to minimize potential impacts to accepted farm practices on surrounding farm lands, as follows:

**Amended Land Use Condition 11 (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:

- a. ~~Locate~~ access roads and temporary construction laydown and staging areas to minimize disturbance of farming practices; ~~and, wherever feasible,~~
- b. ~~shall place~~ turbines and transmission ~~inter~~connection lines along the margins of cultivated areas to reduce the potential for conflict with farm operations, where feasible.
- 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.
- d. Bury ~~Where possible,~~ underground communication and electrical lines ~~shall be buried~~ within the area disturbed by temporary road widening, where possible.

[Final Order on ASC, Land Use Condition 11; AMD4]

Based on compliance with existing and recommended amended condition, the Council finds that proposed RFA4 facility components would satisfy the conditional use standards at MCZO Section 6.025.A.

#### *Section 6.030 General Conditions*

*In addition to the standards and conditions set forth in a specific zone, this article, and other applicable regulations; in permitting a new conditional use or the alteration of an existing conditional use, the Commission may impose conditions which it finds necessary to avoid a detrimental impact and to otherwise protect the best interests of the surrounding area or the County as a whole. These conditions may include the following:*

Morrow County is bound by an energy facility site certificate issued by the Council and must issue a conditional use permit subject only to the conditions included in the site

1 certificate. However, in determining whether the proposed RFA4 facility components  
2 would satisfy the applicable substantive criteria, the Council has the same authority that  
3 the Morrow County decision making body would have to impose conditions the Council  
4 finds necessary under the Morrow County General Conditions provisions.

5  
6 *A. Limiting the manner in which the use is conducted including restricting the time an*  
7 *activity may take place and restraints to minimize such environmental effects as noise,*  
8 *vibration, air pollution, glare and odor.*  
9

10 RFA4 Exhibit X addresses noise and vibration impacts from proposed RFA4 facility  
11 construction and operation. RFA4 Exhibits L, R, and T address potential impacts from glare  
12 and air pollution in accordance with Council applicable standards. While the Council does  
13 not have an applicable standard that addresses odor-related impacts, construction and  
14 operation of proposed RFA4 facility components are not be expected to generate odor  
15 impacts. The Council is not imposing any conditions that would restrict the timing of when  
16 construction or operation of RFA4 components can occur; nor has Morrow County  
17 requested such restrictions.

18  
19 In Section III.Q.1., *Noise Control Regulation* of this order, the Council evaluates the certificate  
20 holder's compliance with the state noise standards and recommends that Council find that the  
21 proposed RFA4 facility components would comply with the Noise Control Regulations in OAR  
22 340-035-0035(1)(b)(B). Based upon the information provided in RFA4 Exhibit X and the analysis  
23 in Section III.Q.1., *Noise Control Regulation* of this order, the Council considers that additional  
24 conditions are not necessary to limit potential noise impacts under this provision.

25  
26 In RFA4 Exhibit R, the certificate holder describes that solar modules have limited reflectivity  
27 which reduces the potential for glare related impacts. Moreover, the solar modules would be  
28 mounted on a tracking system that rotates the modules throughout the day as the sun's angle  
29 changes and that this movement, combined with antireflective coating, would minimize glare  
30 Therefore, the Council does not impose additional conditions under this provision.

31  
32 *B. Establishing a special yard or other open space or lot area or dimension.*  
33

34 Proposed RFA4 facility components are proposed entirely on private land, none of which has  
35 been designated as open space. In RFA4 Exhibit K, the certificate holder describes that no new  
36 lots or parcels would be necessary. As presented above, the Council amends Land Use  
37 Condition 1 (GEN-LU-01) to establish yard setbacks in accordance with MCZO Section 3.010.M.  
38 The Council does not impose additional conditions under this provision.

39  
40 *C. Limiting the height, size or location of a building or other structure.*  
41

1 The County has not recommended any specific conditions related to the height, size or location  
2 of any proposed RFA4 facility component. Therefore, the Council does not adopt any additional  
3 conditions.

4  
5 *D. Designating the size, number, location and nature of vehicle access points.*

- 6  
7 1. *Where access to a county road is needed, a permit from Morrow County Public*  
8 *Works department is required. Where access to a state highway is needed, a permit*  
9 *from ODOT is required.*

10  
11 Access from one or more county roads would be required during construction and operation of  
12 the proposed RFA4 facility components. In RFA4 Exhibit E, the certificate holder identifies that  
13 access approach site permits, crossing and right-of-way permits would be required from the  
14 county and Oregon Department of Transportation. Council previously imposed Land Use  
15 Condition 4 (GEN-LU-02) requiring that, during facility design and construction, the certificate  
16 holder obtain necessary road, access and crossing permits from the county. Therefore, based  
17 on compliance with the previously imposed condition, the Council does not impose additional  
18 conditions under this provision.<sup>33</sup>

- 19  
20 2. *In addition to the other standards and conditions set forth in this section, a Traffic*  
21 *Impact Analysis (TIA) will be required for all projects generating more than 400*  
22 *passenger car equivalent trips per day. A TIA will include: trips generated by the*  
23 *project, trip distribution for the project, identification of intersections for which the*  
24 *project adds 30 or more peak hour passenger car equivalent trips, and level of service*  
25 *assessment, impacts of the project, and mitigation of the impacts. If the corridor is a*  
26 *State Highway, use ODOT standards.(MC-C-8-98)*

27  
28 RFA4 Exhibit K identifies that construction of proposed RFA4 facility components would  
29 generate fewer than 250 trips per day and determined that a TIA would not be required.  
30 Council previously imposed Public Services Condition 7 (PRE-PS-02) and Land Use Condition 13  
31 (PRE-LU-06) requiring that, prior to construction, the certificate holder execute a road use  
32 agreement with Morrow County Department of Public Works and develop and implement a  
33 construction-related Traffic Management Plan, to mitigate for and reduce potential traffic- and  
34 transportation related impacts within Morrow County. These conditions would apply to the  
35 proposed RFA4 facility components. As described above, in RFA4 Exhibit U, the certificate  
36 holder explains that construction of the previously approved wind facility and proposed solar

---

<sup>33</sup> WRWAMD4. DPO Special Advisory Group Comments McLane. 2019-09-06. In comments on the draft proposed order, the SAG commented on the Department's analysis of MCZO Section 6.030(D) General Conditions for vehicle access points and requested that the analysis be amended to describe that the proposed facility would require access from one or more county roads and that crossing and right-of-way permits would be required, which is consistent with certificate holder representations in RFA4. The Department modified the proposed order accordingly.

1 facility components (RFA4) would not be expected to overlap, or that if there were overlapping  
2 construction activities, estimated daily passenger car equivalents would not result in greater  
3 impacts than those evaluated in the *Final Order on the ASC* – which evaluated impacts from up  
4 to 360 workers per day. Long-term operational traffic would generate approximately 2  
5 passenger car or pickup truck trips per day, with infrequent heavy vehicle trips and would not  
6 trigger the requirements of Section 3.010.N. Based on compliance with previously imposed  
7 conditions, the Council does not impose additional conditions under this provision.

8  
9 *E. Increasing the amount of street dedication, roadway width or improvements within the*  
10 *street right-of-way.*

11  
12 *1. It is the responsibility of the land owner to provide appropriate access for emergency*  
13 *vehicles at the time of development. (MC-C-8-98)*

14  
15 As presented in RFA4 Exhibit B, the certificate holder asserts that new access roads constructed  
16 in support of the proposed photovoltaic solar power generation equipment would be designed  
17 in accordance with the most updated Oregon Fire Code (Section 503 and Section D Fire  
18 Apparatus Access Roads, or most current version at time of construction) to provide adequate  
19 access for emergency vehicles. The Council finds that additional conditions are not necessary  
20 under this provision.

21  
22 *F. Designating the size, location, screening, drainage, surfacing or other improvement of a*  
23 *parking area or loading area.*

24  
25 Proposed RFA4 facility components do not include permanent parking areas; parking areas  
26 would be available within the substation footprints. Therefore, the Council does not adopt  
27 additional conditions under this provision.

28  
29 *G. Limiting or otherwise designating the number, size, location, height, and lighting of*  
30 *signs.*

31  
32 The certificate holder represents that signage may be included at the site access road, which  
33 would be installed in accordance with the applicable requirements of MCZO Section 4.070.  
34 Because this would be a design component reviewed under MCZO Article 6 as part of Site Plan  
35 Review and zoning permit with the county and not within Council jurisdiction, the Council does  
36 not adopt additional conditions under this provision.

37  
38 *H. Limiting the location and intensity of outdoor lighting and requiring its shielding.*

39  
40 The certificate holder has not specifically described or proposed outdoor lighting for proposed  
41 RFA4 facility components. However, the Council assumes that minimal outdoor lighting would  
42 be necessary for safety and security. Council previously imposed Scenic Resources Condition 1  
43 (GEN-SR-01) requiring that outdoor night lighting be the minimum number and intensity

1 necessary for safety, directed downward, and have motion sensors. Based on compliance with  
2 the condition, the Council does not impose additional conditions under this provision.

3  
4 *I. Requiring diking, screening, landscaping or another facility to protect adjacent or nearby*  
5 *property and designating standards for its installation and maintenance.*

6  
7 The certificate holder proposes to install a permanent 7- or 8-foot, chain-link fence around the  
8 perimeter of proposed RFA4 facility components, which Council considers sufficient screening  
9 to protect adjacent or nearby property from potential visibility impacts. Further, based upon  
10 the minimal activity associated with installation and maintenance of a chain-link fence, the  
11 Council does not impose additional conditions designating standards for these activities under  
12 this provision.

13  
14 *J. Designating the size, height, location and materials for a fence.*

15  
16 Proposed RFA4 facility components would be bordered by a 7- to 8-foot-high chain-link  
17 security fence. The Council does not impose additional design requirements for the size,  
18 height, location and materials for the fence.

19  
20 *K. Protecting and preserving existing trees, vegetation, water resources, wildlife habitat or*  
21 *other significant natural resources.*

22  
23 Potential impacts to water resources, wildlife habitat and other natural resources from  
24 proposed RFA4 facility components are addressed in RFA4 Exhibits J, O, P, and Q. The Council  
25 presents its evaluation of those impacts and, in some instances, recommends Council amend  
26 conditions. As described in Section III.H. *Fish and Wildlife Habitat* and III.Q.3 *Water Rights* of  
27 this order, the Council considers potential impacts on existing trees and water resources to be  
28 minimal. As presented in Section III.H. *Fish and Wildlife Habitat*, based upon the proposed  
29 mitigation and compliance with the conditions, the Council considers the impacts from  
30 proposed RFA4 facility components to vegetation and wildlife habitat to be in compliance with  
31 the Council's Fish and Wildlife Habitat standard. Therefore, the Council does not impose  
32 additional conditions under this provision.

33  
34 *L. Other conditions necessary to permit the development of the County in conformity with*  
35 *the intent and purpose of this Ordinance and the policies of the Comprehensive Plan.*

36  
37 The Council does not adopt any other conditions of approval beyond those addressed above  
38 and throughout this Land Use section and other sections of this final order.

39  
40 *Section 6.040 Permit and Improvements Assurance*

41  
42 *The Commission may require an applicant to furnish the County with a performance bond or*  
43 *such other form of assurance that the Commission deems necessary to guarantee*



1        *development in accordance with the standards established and the conditions attached in*  
2        *granting a conditional use permit.*

3  
4        MCZO Section 6.040 allows for a Conditional Use Permit to include, as a condition of  
5        approval, a performance bond or other assurances for facility retirement. This provision  
6        aligns with the requirements of the Council's Retirement and Financial Assurance standard.  
7        As described in Section III.G., *Retirement and Financial Assurance*, of this order, the  
8        certificate holder would be required to submit a bond or letter of credit in an amount  
9        determined satisfactory by the Council, prior to construction, for the amount necessary to  
10       decommission proposed RFA4 facility components and restore the site to a useful, non-  
11       hazardous condition. Therefore, the Council finds that through compliance with the Council's  
12       standard, the certificate holder would satisfy the requirements of MCZO Section 6.040.

13  
14        *Morrow County Comprehensive Plan (MCCP)*

15  
16        *Goal 3 Agricultural Lands Element*

17  
18        *Policy 1: It shall be the policy of Morrow County, Oregon, to preserve agricultural lands, to*  
19        *protect agriculture as its main economic enterprise, to balance economic and environmental*  
20        *conditions, to limit noncompatible nonagricultural development, and to maintain a high*  
21        *level of livability in the County*

22  
23        The Agricultural Lands Element, Policy 1 is consistent with the statutory and rule provisions  
24        regarding protection of Goal 3 resources and is largely implemented through the County's  
25        zoning ordinance. The most important factor is that photovoltaic solar power generation  
26        facilities are expressly listed as a conditional use in EFU-zoned land under MCZO Section  
27        3.010.C.24. Moreover, as discussed above in the recommended findings of compliance with  
28        MCZO Section 6.025, with recommended amended conditions, potential impacts from  
29        construction and operation of proposed RFA4 facility components to agricultural lands would  
30        be minimized as much as possible. While this policy does not include any approval criteria, the  
31        Council finds that construction and operation of proposed RFA4 facility components would be  
32        consistent with MCCP Agricultural Policy 1.

33  
34        *Policy 4: It shall be the policy of the County to develop and implement comprehensive and*  
35        *definitive criteria for the evaluation of all non-farm developments to ensure that all*  
36        *objectives and policies set forth herein are complied with to the maximum level possible.*

37  
38        The Agricultural Lands Element, Policy 4 appears to be a directive to the County to develop  
39        definitive criteria for evaluating non-farm developments within EFU-zoned land. The Council  
40        construes the directive to apply to substantive criteria adopted in the MCZO and recommends  
41        Council find, based on the evaluation presented in this section, that the certificate holder  
42        demonstrates that proposed RFA4 facility components can be designed, constructed, operated  
43        and retired in compliance with the MCZO. Therefore, the Council finds that proposed RFA4  
44        facility components would be consistent with MCCP Agricultural Element Policy 4.

1  
2       *Goal 13 Energy Conservation Element*

3  
4       *Policy 2: To conserve energy and develop and use renewable energy resources.*

5  
6 Proposed RFA4 facility components include solar photovoltaic power generation equipment,  
7 which the Council finds would be consistent with M CCP Energy Conservation Element Policy 2.

8  
9       *Policy 3: Encourage development of solar and wind resources.*

10  
11 Proposed RFA4 facility components include solar photovoltaic power generation equipment,  
12 which the Council finds would be consistent with M CCP Energy Conservation Element Policy 3.

13  
14       *Policy 9: The County will encourage the development of alternative energy sources in County*  
15       *industries and businesses*

16  
17 Proposed RFA4 facility components include solar photovoltaic power generation equipment, a  
18 renewable energy source considered an “alternative energy source.” Therefore, the Council  
19 finds that the proposed RFA4 facility components would be consistent with M CCP Energy  
20 Conservation Element Policy 9

21  
22       *Goal 9 Economic Element*

23  
24       *Policy 2A: To maximize the utilization of the local work force as job opportunities increase*

25  
26 M CCP Goal 9 Policy 2A establishes a policy within the Economic Element to maximize the  
27 utilization of the local work force as job opportunities increase. The certificate holder describes  
28 that construction and operation of proposed RFA4 facility components would result in  
29 approximately 250 temporary and up to 2 full-time jobs, where, during construction, 80 percent  
30 of the workforce may be hired locally. Therefore, the Council finds that the proposed RFA4  
31 facility components would be consistent with M CCP Economic Element Goal 9 Policy 2A.

32  
33       III.E.II. Directly Applicable State Rules

34  
35 State rules which apply directly to proposed RFA4 facility components include OAR 660-033-  
36 0130(38), as amended in May 2019 by the Land Conservation and Development Commission  
37 (LCDC).

38       *OAR 660-033-0130(38) Standards for Approval for Photovoltaic Solar Power Generation*  
39       *Facility in Exclusive Farm Use Zones*

40  
41       *(38) A proposal to site a photovoltaic solar power generation facility shall be subject to*  
42       *the following definitions and provisions:*

1           (g) *For high-value farmland described at ORS 195.300(10), a photovoltaic solar*  
2           *power generation facility shall not use, occupy, or cover more than 12 acres*  
3           *unless:*

4  
5           (A) *The provisions of paragraph (h)(H) are satisfied; or*

6           (B) *A county adopts, and an applicant satisfies, land use provisions authorizing*  
7           *projects subject to a dual-use development plan. Land use provisions*  
8           *adopted by a county pursuant to this paragraph may not allow a project in*  
9           *excess of 20 acres. Land use provisions adopted by the county must require*  
10           *sufficient assurances that the farm use element of the dual-use development*  
11           *plan is established and maintained so long as the photovoltaic solar power*  
12           *generation facility is operational or components of the facility remain on*  
13           *site. The provisions of this subsection are repealed on January 1, 2022.*

14  
15       OAR 660-033-0130(38)(g)(A) restricts a photovoltaic solar power generation facility from  
16       occupying more than 12 acres of high value farmland unless the County adopts a dual-use  
17       development plan, which would then allow no more than 20 acres, or the provisions of OAR  
18       660-033-0130(38)(h)(H) are satisfied. Neither of these provisions are applicable to the  
19       proposed RFA4 facility components

20  
21       As described in RFA4 Exhibit K, proposed RFA4 facility components would preclude  
22       approximately 64 acres of high-value farmland under the ORS 195.300(10)(c)(A) high-value  
23       farmland definition (i.e. within the place of use for a water permit) and approximately 165  
24       acres of high-value farmland under the ORS 195.300(10)(f)(C) high-value farmland definition  
25       (i.e. lands within Columbia Valley American Viticulture Area which meets certain slope,  
26       elevation, and aspect criteria). The locations of high-value farmland within the proposed  
27       amended site boundary area presented in RFA4 Exhibit L Figure K-4.

28  
29       The Council finds that the proposed RFA4 facility components would be located on land  
30       qualifying as high-value farmland under ORS 195.300(10)(c)(A) and (f)(C), and therefore would  
31       not meet OAR 660-033-0130(38)(g) allowing for a proposed facility to occupy more than 12  
32       acres of high-value farmland without a Goal 3 exception. Therefore, the certificate holder  
33       requests Council approval of an exception to Goal 3 to occupy more than 12 acres of high-  
34       value farmland.

35  
36       The Council's assessment of the certificate holder's Goal 3 exception request is evaluated in  
37       Section III.E.IV below and the Council finds that an exception to Goal 3 is justified. The other  
38       provisions of this OAR apply because proposed RFA4 facility components would affect land  
39       classified as high-value farmland.

40  
41           (h) *The following criteria must be satisfied in order to approve a photovoltaic solar*  
42           *power generation facility on high-value farmland described at ORS 195.300(10).*  
43

1           (A) *The proposed photovoltaic solar power generation facility will not create*  
2           *unnecessary negative impacts on agricultural operations conducted on any*  
3           *portion of the subject property not occupied by project components. Negative*  
4           *impacts could include, but are not limited to, the unnecessary construction of*  
5           *roads dividing a field or multiple fields in such a way that creates small or*  
6           *isolated pieces of property that are more difficult to farm, and placing*  
7           *photovoltaic solar power generation facility project components on lands in a*  
8           *manner that could disrupt common and accepted farming practices;*

9  
10          (B) *The presence of a photovoltaic solar power generation facility will not result*  
11          *in unnecessary soil erosion or loss that could limit agricultural productivity on*  
12          *the subject property. This provision may be satisfied by the submittal and*  
13          *county approval of a soil and erosion control plan prepared by an adequately*  
14          *qualified individual, showing how unnecessary soil erosion will be avoided or*  
15          *remedied. The approved plan shall be attached to the decision as a condition*  
16          *of approval;*

17  
18          (C) *Construction or maintenance activities will not result in unnecessary soil*  
19          *compaction that reduces the productivity of soil for crop production. This*  
20          *provision may be satisfied by the submittal and county approval of a plan*  
21          *prepared by an adequately qualified individual, showing how unnecessary soil*  
22          *compaction will be avoided or remedied in a timely manner through deep soil*  
23          *decompaction or other appropriate practices. The approved plan shall be*  
24          *attached to the decision as a condition of approval;*

25  
26          (D) *Construction or maintenance activities will not result in the unabated*  
27          *introduction or spread of noxious weeds and other undesirable weed species.*  
28          *This provision may be satisfied by the submittal and county approval of a*  
29          *weed control plan prepared by an adequately qualified individual that*  
30          *includes a long-term maintenance agreement. The approved plan shall be*  
31          *attached to the decision as a condition of approval;*

32  
33          OAR 660-033-0130(38)(h)(A) – (D) requires a demonstration that the proposed photovoltaic  
34          solar power generation facility would not create unnecessary negative impacts to agricultural  
35          operations, soil erosion or loss, soil compaction, or the unabated introduction or spread of  
36          noxious weeds.

37  
38                OAR 660-033-0130(38)(h)(A) *Unnecessary Negative Impacts to Agricultural Operations*

39  
40          OAR 660-033-0130(38)(h)(A) requires a demonstration that proposed RFA4 facility components  
41          would not create unnecessary negative impacts to agricultural operations, such as dividing a  
42          field or multiple fields or placing facility components on lands in a manner that could disrupt  
43          accepted farming practices. The certificate holder asserts that proposed RFA4 facility  
44          components would not impact or create unnecessary negative impacts on agricultural

1 operations for several reasons, some of which rely upon previously imposed site certificate  
2 conditions. The proposed location of RFA4 facility components represent a consolidation of  
3 equipment in areas adjacent to and parallel to existing roads (see RFA4 Exhibit C, Figure C-2) in  
4 order to minimize impacts to current and future dryland wheat farming activities on the  
5 remainder of the tract or on neighboring tracts.<sup>34</sup> Designing proposed facility components in  
6 order to minimize impacts to agricultural activities is required under Land Use Condition 11  
7 (GEN-LU-04). The certificate holder also describes that existing roads would be used during  
8 construction to minimize access to existing agricultural uses on the subject property that would  
9 otherwise occur from the development of new roads. Right-to-Farm Disclaimers would also be  
10 executed with affected landowners, in accordance with Council's previously imposed Land Use  
11 Condition 7 (PRE-LU-04), legally authorizing a continuation of adjacent farm uses.

12  
13 Based on proposed RFA4 facility component micrositing and compliance with previously  
14 imposed conditions, the Council concludes that proposed RFA4 facility components would not  
15 create unnecessary negative impacts on agricultural operations conducted on any portion of  
16 the subject property not occupied by facility components, and therefore satisfies the  
17 requirements under OAR 660-033-0130(38)(h)(A).

18  
19 *OAR 660-033-0130(38)(h)(B) Unnecessary Soil Erosion or Loss*  
20

21 OAR 660-033-0130(38)(h)(B) requires the certificate holder to demonstrate that proposed RFA4  
22 facility components would not "result in unnecessary soil erosion or loss that could limit  
23 agricultural productivity on the subject property" and states that the "provision may be  
24 satisfied by submittal and county approval of a soil and erosion control plan prepared by an  
25 adequately qualified individual, showing how unnecessary soil erosion will be avoided or  
26 remedied."

27  
28 In addition to satisfying this provision, the certificate holder must also demonstrate compliance  
29 with the Council's Soil Protection standard; current Soil Protection Conditions 1 and 2 (CON-SP-  
30 01 and CON-SP-02) require the certificate holder to construct the facility in accordance with an  
31 Erosion and Sediment Control Plan, approved by the Oregon Department of Environmental  
32 Quality (DEQ), and a National Pollutant Discharge Elimination System (NPDES) Storm Water  
33 Discharge General Permit 1200-C. Furthermore, Soil Protection Condition 4 (PRE-SP-02)  
34 requires that, during construction and operation, the certificate holder implement topsoil  
35 management measures in accordance with a Department approved Revegetation Plan. These  
36 plans include best management practices to be implemented during facility construction and  
37 operation. The draft amended Revegetation Plan is provided as Attachment E of this order.  
38

39 Based on compliance with previously imposed conditions, the Council concludes that proposed  
40 RFA4 facility components would not result in unnecessary soil erosion or loss that could limit

---

<sup>34</sup> "Tract" is defined in LCDC rule as "one or more contiguous lots or parcels under the same ownership." OAR 660-033-0020(14).

1 agricultural productivity, and therefore satisfies the requirements under OAR 660-033-  
2 0130(38)(h)(B).

3  
4 *OAR 660-033-0130(38)(h)(C) Unnecessary Soil Compaction*

5  
6 OAR 660-033-0130(38)(h)(C) requires the certificate holder to demonstrate that proposed RFA4  
7 facility components would not “result in unnecessary soil compaction that reduces the  
8 productivity of soil for crop production.” The certificate holder asserts that construction of  
9 proposed RFA4 facility components would not result unnecessary soil compaction because  
10 grading would be limited to roads, inverter and energy storage system sites within the  
11 proposed solar array area and that mass grading or grading outside of the proposed amended  
12 site boundary would not occur. Council previously imposed Fish and Wildlife Habitat Condition  
13 11 (PRE-FW-05) requiring that, during construction and operation, the certificate holder  
14 implement a Department-approved Revegetation Plan, which includes excavation and soil  
15 storage by horizon to reduce potential impacts of soil compaction.

16  
17 Based on the certificate holder’s proposed construction activities and previously imposed  
18 conditions, the Council concludes that proposed RFA4 facility components would not result in  
19 unnecessary soil compaction and would satisfy the requirements under OAR 660-033-  
20 0130(38)(h)(C).

21  
22 *OAR 660-033-0130(38)(h)(D) Unnecessary Spread of Noxious Weeds*

23  
24 OAR 660-033-0130(38)(h)(D) requires the certificate holder to demonstrate that proposed  
25 RFA4 facility components would not result in the “unabated introduction or spread of noxious  
26 weeds and other undesirable weed species.” In addition to OAR 660-033-0130(38)(h)(d),  
27 Morrow County has a Weed Control Ordinance, MCZO Section 9 (January 2015), and there are  
28 state weed statutes imposed under ORS Chapter 569. ORS 569.390 applies to any person, firm  
29 or corporation owning or occupying land and requires that noxious weeds be destroyed or  
30 prevented from seeding. Council previously imposed Land Use Condition 6 (PRE-LU-03)  
31 requiring that, prior to construction, the certificate holder obtain approval by the Department  
32 in consultation with ODFW and County Weed Control personnel of a Weed Control Plan.  
33 Control of noxious weeds is a priority and required during all phases of facility construction and  
34 operation. In RFA4, the certificate holder explains that graded areas would be replanted with a  
35 low-growing mix of grasses and that these areas would be mowed as needed for fire safety  
36 requirements and to keep vegetation from interfering with operations and maintenance  
37 activities. These sites would be also be treated for weeds using a combination of mechanical  
38 methods and herbicides. Other weed control measures may include restriction of vehicle

1 speeds, watering of active areas, watering of stockpiles, watering on roadways, and track-out  
2 control at site exits.<sup>35</sup>

3  
4 As part of Morrow County's Weed Control program, the county developed Guidelines for a  
5 Weed Management Plan (guidelines). The guidelines include the following 7 recommended  
6 components for inclusion in a weed management plan: a map of land features, map identifying  
7 weed control and sensitive areas, identification of control methods, identification of control  
8 treatment timing, description of a plan for follow up work, and other considerations. To  
9 supplement the previously imposed Land Use Condition 6 (PRE-LU-03) and ensure that the  
10 plan, to be finalized prior to construction, contains adequate information to allow the Council  
11 and members of the public the opportunity to review plan components, the Department  
12 provides a draft Noxious Weed Control Plan based on Morrow County's guidelines, certificate  
13 holder representations, and guidance from ODFW and weed control experts as provided in  
14 Attachment F of this order.<sup>36</sup> As presented in Attachment A, draft amended Site Certificate, the  
15 Council amends Land Use Condition 6 (PRE-LU-03) to reference finalization of the draft plan  
16 provided as Attachment F of this order.

17  
18 Based upon compliance with amended Land Use Condition 6 (PRE-LU-03), the Council  
19 concludes that the proposed RFA4 facility components would not result in unabated  
20 introduction or spread of noxious weeds or other undesirable weed species and would satisfy  
21 the requirements under OAR 660-033-0130(38)(f)(D).

22  
23 *(E) Except for electrical cable collection systems connecting the photovoltaic*  
24 *solar generation facility to a transmission line, the project is not located on*  
25 *those high-value farmland soils listed in OAR 660-033-0020(8)(a);*

26  
27 OAR 660-033-0130(38)(h)(E) requires that the certificate holder demonstrate that, with the  
28 exception of grid interconnection electrical collection systems, proposed RFA4 facility  
29 components would not be located on high-value farmland soils. As defined in OAR 660-033-  
30 0020(8)(a), high value soils are defined as irrigated and classified prime, unique, Class I or II  
31 soils; or, not irrigated and classified prime, unique, Class I or Class II soils.

32  
33 As presented in Table 2: *Soil Types and NRCS Classification within Amended Site Boundary Area*  
34 below, the Natural Resource Conservation Service (NRCS) soil classification for soils within the  
35 new site boundary area includes Class I – VII soils; however, as described above, there are no  
36 current or historic irrigated agricultural uses within the proposed new site boundary area.

---

<sup>35</sup> WRWAMD4Doc14-3 RFA4 Complete RFA4 Exhibit B. Project Desc Final, Section 2.4. 2019-07-01.

<sup>36</sup> SRWAMD4. DPO Public Comment Gilbert. 2019-09-09. On the record of the draft proposed order, Ms. Gilbert expresses concern related to weed control and the certificate holder's ability to satisfy ORS 569.390 and ORS 469.507. The Department agreed that the previously imposed condition related to weed control was lacking in sufficiency necessary to demonstrate that the applicable weed control requirements would be met and provided, in response, a draft Noxious Weed Control Plan as Attachment F of the order.

Therefore, for this analysis, the Council relies on the non-irrigated NRCS capability class which includes Class III – VII soils. Therefore, the Council finds that proposed RFA4 facility components would satisfy OAR 660-033-0130(38)(h)(E).

**Table 2: Soil Types and NRCS Classification within Amended Site Boundary Area**

Map ID	Soil Unit/Type	Irrigated NRCS Capability Class	Non-Irrigated NRCS Capability Class
13E	Gravden very gravelly loam, (20 to 40 percent slopes)	No Value	7
28E	Lickskillet very stony loam (7 to 40 percent slopes)	No Value	7
45A	Mues silt loam (0 to 3 percent slopes)	<b>1</b>	3
45B	Ritzville silt loam (2 to 7 percent slopes)	<b>2</b>	3
45C	Ritzville silt loam (7 to 12 percent slopes)	3	3
47E	Murtip-Caterl complex (30 to 60 percent slopes)	6	6
71B	Walluski silt loam (0 to 7 percent slopes)	<b>2</b>	4
75B	Quincy loamy fine sand (0 to 5 percent slopes)	3	3
75C	Willis silt loam (5 to 12 percent slopes)	3	3
78	Ferguson very fine sandy loam (30 to 60 percent south slopes)	3	6
Source: WRWAMD4 RFA4 Exhibit I; ASC Exhibit I			

(F) The project is not located on those high-value farmland soils listed in OAR 660-033-0020(8)(b)-(e) or arable soils unless it can be demonstrated that:

- (i) Non high-value farmland soils are not available on the subject tract;
- (ii) Siting the project on non high-value farmland soils present on the subject tract would significantly reduce the project's ability to operate successfully; or
- (iii) The proposed site is better suited to allow continuation of an existing commercial farm or ranching operation on the subject tract than other possible sites also located on the subject tract, including those comprised of non high-value farmland soils; and

OAR 660-033-0130(38)(h)(F) requires the certificate holder to demonstrate that proposed RFA4 facility components could not be located on high-value farmland soils or arable soils unless: 1) non high-value farmland soils are not available on the subject tract; 2) siting the project on non high-value farmland soils, if present, would significantly impact the project's ability to operate; or 3) the site is better suited than other possible sites because it would allow



1 continued operation of existing farmland.<sup>37</sup> Proposed RFA4 facility components would not be  
2 located on high-value farmland soils, as defined in OAR 660-033-0020(8)(b)-(e); therefore, OAR  
3 660-033-0130(38)(h)(F) does not apply and, instead, OAR 660-033-010(38)(i) applies, as  
4 evaluated below.

5  
6 *(G) A study area consisting of lands zoned for exclusive farm use located within*  
7 *one mile measured from the center of the proposed project shall be*  
8 *established and:*

- 9 *(i) If fewer than 48 acres of photovoltaic solar power generation facilities*  
10 *have been constructed or received land use approvals and obtained*  
11 *building permits within the study area, no further action is necessary.*  
12 *(ii) When at least 48 acres of photovoltaic solar power generation facilities*  
13 *have been constructed or received land use approvals and obtained*  
14 *building permits, either as a single project or as multiple facilities within*  
15 *the study area, the local government or its designate must find that the*  
16 *photovoltaic solar power generation facility will not materially alter the*  
17 *stability of the overall land use pattern of the area. The stability of the*  
18 *land use pattern will be materially altered if the overall effect of existing*  
19 *and potential photovoltaic solar power generation facilities will make it*  
20 *more difficult for the existing farms and ranches in the area to continue*  
21 *operation due to diminished opportunities to expand, purchase or lease*  
22 *farmland, acquire water rights, or diminish the number of tracts or*  
23 *acreage in farm use in a manner that will destabilize the overall character*  
24 *of the study area.*

25  
26 OAR 660-033-0130(38)(h)(G) requires an evaluation of photovoltaic solar power generation  
27 facility development within 1-mile of the proposed project site. In RFA4 Exhibit K, the certificate  
28 holder describes that based on communication with Morrow County Planning Director Carla  
29 McLane on February 21, 2019, there are no other photovoltaic solar power generation facilities  
30 within 1-mile of the proposed project site. Therefore, no further action is necessary.

31  
32 *(H) A photovoltaic solar power generation facility may be sited on more than 12*  
33 *acres of high-value farmland described in ORS 195.300(10)(f)(C) without*  
34 *taking an exception pursuant to ORS 197.732 and OAR chapter 660, division*  
35 *4, provided the land:*

- 36 *(i) Is not located within the boundaries of an irrigation district;*  
37 *(ii) Is not at the time of the facility's establishment, and was not at any time*  
38 *during the 20 years immediately preceding the facility's establishment,*  
39 *the place of use of a water right permit, certificate, decree, transfer order*

---

<sup>37</sup> As defined in OAR 660-033-0020, "tract" means one or more contiguous lots or parcels under the same ownership. The Council notes that because OAR 660-033-0130(38)(g)(A) requires an evaluation of soil conditions on the "subject tract," that such an evaluation may require the review of areas outside of the proposed site boundary area.

- or ground water registration authorizing the use of water for the purpose of irrigation;*
- (iii) Is located within the service area of an electric utility described in ORS 469A.052(2);*
- (iv) Does not exceed the acreage the electric utility reasonably anticipates to be necessary to achieve the applicable renewable portfolio standard described in ORS 469A.052(3); and*
- (v) Does not qualify as high-value farmland under any other provision of law; or;*

OAR 660-033-0130(38)(h)(H) is the evaluation triggered under OAR 660-033-0130(38)(g)(A), as discussed above, and restricts a photovoltaic solar power generation facility from occupying more than 12 acres of high value farmland unless certain criteria are met as outlined in the rule. The proposed RFA4 facility components would not meet the criteria in OAR 660-033-0130(38)(h)(H).

As evaluated above, the Council finds that the proposed RFA4 facility components would be located on land qualifying as high-value farmland under ORS 195.300(10)(a) and (c) and therefore would not meet OAR 660-033-0130(38)(g) allowing for a proposed facility to occupy more than 12 acres of high-value farmland without a Goal 3 exception. Therefore, the certificate holder requests Council approval of an exception to Goal 3 to occupy more than 12 acres of high-value farmland.

The Council's assessment of the certificate holder's Goal 3 exception request is evaluated in Section III.E.IV below and recommends that the Council find that an exception to Goal 3 is justified. The other provisions of this OAR apply because proposed RFA4 facility components would affect land classified as high-value farmland.

*(i) For arable lands, a photovoltaic solar power generation facility shall not use, occupy, or cover more than 20 acres. The governing body or its designate must find that the following criteria are satisfied in order to approve a photovoltaic solar power generation facility on arable land:*

- (A) Except for electrical cable collection systems connecting the photovoltaic solar generation facility to a transmission line, the project is not located on those high-value farmland soils listed in OAR 660-033-0020(8)(a);*
- (B) The project is not located on those high-value farmland soils listed in OAR 660-033-0020(8)(b)-(e) or arable soils unless it can be demonstrated that:*
  - (i) Nonarable soils are not available on the subject tract;*
  - (ii) Siting the project on nonarable soils present on the subject tract would significantly reduce the project's ability to operate successfully; or*
  - (iii) The proposed site is better suited to allow continuation of an existing commercial farm or ranching operation on the subject tract than*

1                                *other possible sites also located on the subject tract, including those*  
2                                *comprised of nonarable soils;*  
3                                *(C) No more than 12 acres of the project will be sited on high-value farmland*  
4                                *soils described at ORS 195.300(10);*  
5

6 OAR 660-033-0130(38)(i)(A)-(C) restricts a photovoltaic solar power generation facility from  
7 occupying more than 20 acres of high value farmland and requires the following criteria to be  
8 met: 1) with the exception of a grid interconnecting electrical collection line, facility would not  
9 be located on high-value farmland soils; 2) facility is not located on high-value farmland soils or  
10 arable soils unless i) nonarable soils are not available on the subject tract; ii) siting facility on  
11 nonarable soils on subject tract would significantly increase cost of project operability; or iii)  
12 proposed site is better suited to provide continuation of farming on subject tract; and 3) no  
13 more than 12 acres of high value farmland soils would be precluded by the project.  
14

15 As described in RFA4 Exhibit K, proposed RFA4 facility components would preclude  
16 approximately 165 acres of high-value farmland under the ORS 195.300(10)(f)(C) high-value  
17 farmland definition (i.e. lands within Columbia Valley American Viticulture Area which meets  
18 certain slope, elevation, and aspect criteria) and approximately 64 acres of high-value farmland  
19 under the ORS 195.300(10)(c)(A) high-value farmland definition (i.e. within the place of use for  
20 a water permit).<sup>38</sup> The locations of high-value farmland within the proposed amended site  
21 boundary area presented in RFA4 Exhibit L Figure K-4. As presented in Table 2: *Soil Types and*  
22 *NRCS Classification within Amended Site Boundary Area* of this order, the area within the  
23 amended site boundary is comprised of Class III to VII soils, which represents arable and non-  
24 arable land.  
25

26 RFA4 Exhibit K Figures K-4 and K-5 represent arable and non-arable lands within the analysis  
27 area. The certificate holder describes that siting the proposed RFA4 facility components to  
28 completely avoid arable land is not possible due to the patchy and irregular nature of non-  
29 arable soils on the subject tract. As shown on RFA4 Exhibit K Figure K-4, the available non-  
30 arable land generally consists of narrow extents of land that follow drainages or steep slopes.  
31 The certificate holder suggests that the amount of non-arable lands on the subject tract is not  
32 sufficient in size to support proposed project footprint and would significantly reduce the ability  
33 to operate successfully because the location and dimension of those soils (and similar to the  
34 high-value farmland) is patchy, making siting solely on non-arable soils not feasible. Solar arrays  
35 utilizing the available non-arable land would have to be broken up into many more smaller  
36 solar arrays with substantially more supporting infrastructure such as access roads, thereby  
37 resulting in additional resource impacts to accepted farm practices.

38 Based on the representations in RFA4 Exhibit K, as summarized above, the Council finds that  
39 proposed RFA4 facility components would satisfy OAR 660-033-0130(38)(i)(A)-(C).  
40

---

<sup>38</sup> WRWAMD4Doc14-13 RFA4 Complete RFA4 Exhibit K. Land Use Final, Section 5.8. 2019-07-01.

(D) A study area consisting of lands zoned for exclusive farm use located within one mile measured from the center of the proposed project shall be established and:

(i) If fewer than 80 acres of photovoltaic solar power generation facilities have been constructed or received land use approvals and obtained building permits within the study area, no further action is necessary.

(ii) When at least 80 acres of photovoltaic solar power generation facilities have been constructed or received land use approvals and obtained building permits, either as a single project or as multiple facilities within the study area, the local government or its designate must find that the photovoltaic solar power generation facility will not materially alter the stability of the overall land use pattern of the area. The stability of the land use pattern will be materially altered if the overall effect of existing and potential photovoltaic solar power generation facilities will make it more difficult for the existing farms and ranches in the area to continue operation due to diminished opportunities to expand, purchase or lease farmland, acquire water rights, or diminish the number of tracts or acreage in farm use in a manner that will destabilize the overall character of the study area; and

OAR 660-033-0130(38)(i)(D) requires an evaluation of photovoltaic solar power generation facility development within 1-mile of the proposed project site. In RFA4 Exhibit K, the certificate holder describes that based on communication with Morrow County Planning Director Carla McLane on February 21, 2019, there are no other photovoltaic solar power generation facilities within 1-mile of the proposed project site. Therefore, no further action is necessary.

(E) The requirements of OAR 660-033-0130(38)(h)(A), (B), (C) and (D) are satisfied.

OAR 660-033-0130(38)(i)(E) requires Council to find that OAR 660-033-0130(38)(h)(A)-(D) are satisfied. As presented in this section, the Council finds that the proposed RFA4 facility components would satisfy the requirements of OAR 660-033-0130(38)(h)(A)-(D).

(k) An exception to the acreage and soil thresholds in subsections (g), (h), (i), and (j) of this section may be taken pursuant to ORS 197.732 and OAR chapter 660, division 4.

OAR 660-033-0130(38)(k) establishes that, for projects that would be sited on 20 acres or more of high-value farmland, an exception is required pursuant to ORS 197.732 and OAR Chapter 660, division 4. Proposed RFA4 facility components would preclude more than 20 acres of high-value farmland from agricultural use. The Council's assessment of the certificate holder's Goal 3 exception request is evaluated in Section III.E.IV below and recommends that the Council find that an exception to Goal 3 is justified.

1  
2       (l) *The county governing body or its designate shall require as a condition of approval*  
3       *for a photovoltaic solar power generation facility, that the project owner sign and*  
4       *record in the deed records for the county a document binding the project owner and*  
5       *the project owner's successors in interest, prohibiting them from pursuing a claim*  
6       *for relief or cause of action alleging injury from farming or forest practices as*  
7       *defined in ORS 30.930(2) and (4).*  
8

9       OAR 660-033-0130(38)(l) requires the governing body to impose a condition that the  
10      certificate holder sign and record in the deed records for the County a document binding the  
11      certificate holder and the certificate holder owner's successors in interest, prohibiting them  
12      from pursuing a claim for relief or cause of action alleging injury from farming. Existing Land  
13      Use Condition 7 (PRE-LU-04) requires the certificate holder to record "in the real property  
14      records of Morrow County a Covenant Not to Sue with regard to generally accepted farming  
15      practices on adjacent farmland." Based on compliance with the existing condition, the Council  
16      concludes the requirements under OAR 660-033-0130(38)(k) would be satisfied.  
17

18       (m) *Nothing in this section shall prevent a county from requiring a bond or other*  
19       *security from a developer or otherwise imposing on a developer the responsibility*  
20       *for retiring the photovoltaic solar power generation facility.*  
21

22      OAR 660-033-0130(38)(m) allows for the governing body to require a bond or letter of credit  
23      for the amount necessary to retire the facility during decommissioning. Existing Retirement  
24      and Financial Assurance Condition 4 and 5 requires the certificate holder to obtain a bond or  
25      letter of credit, before beginning construction. Therefore, based upon compliance with existing  
26      Retirement and Financial Assurance Condition 4 and 5, the Council concludes that the  
27      requirements under OAR 660-033-0130(38)(l) would be satisfied.  
28

### 29       III.E.III. ORS 215.274 Applicability Evaluation

30

31      *ORS 215.283(1)(c) and ORS 215.274 – Associated Transmission Lines Necessary for Public Service*  
32

33      Transmission lines that meet the definition of an "associated transmission line" must consider  
34      the requirements of ORS 215.274. If a utility facility necessary for public service is an  
35      "associated transmission line" as defined in ORS 215.274 and ORS 469.300, the use may be  
36      established in EFU-zoned land pursuant to ORS 215.283(1)(c).  
37

38      ORS 469.300(3) defines "associated transmission lines" as "new transmission lines constructed  
39      to connect an energy facility to the first point of junction of such transmission line or lines with  
40      either a power distribution system or an interconnected primary transmission system or both  
41      or to the Northwest Power Grid," and that definition is incorporated by reference in ORS  
42      215.274. Associated transmission lines reviewed under ORS 215.274 are a subset of the  
43      transmission lines that could be evaluated as utility facilities necessary for public service under  
44      ORS 215.283(1)(c).

Proposed RFA4 facility components include an electrical collection system that would collect and transmit generated energy from the solar modules to the expanded Wheatridge West collector substation. The electrical collection system would predominately be comprised of underground 34.5 cables used to aggregate electricity from transformers located throughout the solar array areas; the certificate holder represents that some of the collector lines may be aboveground if undergrounding is infeasible due to geographic constraints such as a stream or steep slope crossing. Two segments of 34.5 kV collector line would extend outside of the solar module areas, extending 0.6-of a mile and 2.3 miles west, connecting Solar Array 1 to the expanded Wheatridge West collector substation and Solar Array 1 to Solar Array 2, respectively. The certificate holder asserts that most, if not all, of the longer collector line segments are expected to be underground.

In RFA4, the certificate holder relies on the definition of a photovoltaic solar power generation facility (facility) under LCDC's OAR 660-033-0130(38)(f), mirrored in MCZO Section 3.010.K.3.(e), which specify that the facility includes equipment that transfers electricity and also includes electrical cable collection systems that connect the facility to a transmission line. The longer segments of 34.5 kV collector lines would operate to transfer energy from the solar modules to the collector substation. Therefore, the certificate holder argues that these longer collector line segments would not meet the definition of an associated transmission line under ORS 215.274 and should be evaluated as part of the facility under OAR 660-033-0130(38). Based on the above analysis, the Council evaluates the longer 34.5 kV collector line segments as part of the electrical collection system covered under and as part of the photovoltaic solar power generation facility, and as such, the ORS 215.274 analysis is not required as RFA4 does not include an associated transmission line.

#### III.E.IV. Goal 3 Exception

The proposed RFA4 facility components would be sited on more than 12 acres of high-value farmland as defined in ORS 195.300(10), and would preclude more than 12 acres of high value farmland and more than 20 acres of arable land from use as a commercial agricultural enterprise. Therefore, the proposed RFA4 solar facility components would not comply with OAR 660-033-0130(38)(g) and (38)(i) unless a goal exception is taken. Pursuant to ORS 469.504(1)(b)(B), non-compliance with a statewide planning goal requires a determination by the Council that an exception to Goal 3 is warranted under ORS 469.504(2) and the implementing rule at OAR 345-022-0030(4).

Goal 2, under OAR 660-015-0020(2)(Part II), permits an "exception" to the requirement of a goal for "specific properties or situations." The text of Goal 2, part II, pertaining to exceptions is codified in ORS 197.732; however, for EFSC-jurisdictional facilities, ORS 469.504(2) establishes the requirements that must be met for the Council to take an exception to a land use planning goal, not the LCDC rule or statute. The requirements of ORS 469.504(2) are implemented through the Council's Land Use standard at OAR 345-022-0030(4), which states:

(4) The Council may find goal compliance for a proposed facility that does not otherwise comply with one or more statewide planning goals by taking an exception to the applicable goal. Notwithstanding the requirements of ORS 197.732, the statewide planning goal pertaining to the exception process or any rules of the Land Conservation and Development Commission pertaining to the exception process goal, the Council may take an exception to a goal if the Council finds:

- (a) The land subject to the exception is physically developed to the extent that the land is no longer available for uses allowed by the applicable goal;
- (b) The land subject to the exception is irrevocably committed as described by the rules of the Land Conservation and Development Commission to uses not allowed by the applicable goal because existing adjacent uses and other relevant factors make uses allowed by the applicable goal impracticable; or
- (c) The following standards are met:
  - (A) Reasons justify why the state policy embodied in the applicable goal should not apply;
  - (B) The significant environmental, economic, social and energy consequences anticipated as a result of the proposed facility have been identified and adverse impacts will be mitigated in accordance with rules of the Council applicable to the siting of the proposed facility; and
  - (C) The proposed facility is compatible with other adjacent uses or will be made compatible through measures designed to reduce adverse impacts.

The provisions of OAR 345-022-0030(4)(a) and (b) are not applicable to the proposed amendment request. The certificate holder submitted an assessment as to why a goal exception under OAR 345-022-0030(4)(c) is appropriate for proposed RFA4 facility components; the Council agrees that a goal exception under OAR 345-022-0030(4)(c) is appropriate, and the Council's evaluation of the OAR 345-022-0030(4)(c) is provided below.

#### Reasons Supporting an Exception

Under OAR 345-022-0030(4)(c)(A) (and ORS 469.504(2)(c)(A)), in order for the Council to determine whether to grant an exception to a statewide planning goal, the certificate holder must provide reasons justifying why the state policy embodied in the applicable goal should not apply. The state policy embodied in Goal 3 is the preservation and maintenance of agricultural land for farm use. The certificate holder's arguments relating to "reasons supporting an exception" are discussed below.

#### *Proposed Facility Components are Locationally Dependent*

The certificate holder presents the proposed location of RFA4 facility components as a reason justifying a Goal 3 exception and describes that the site provides a comparative advantage to other sites based on proximity to the regional grid for interconnection, sufficient solar access devoid of dense trees and buildings, flat terrain devoid of sensitive environmental features,

1 access to the regional transportation network, avoided impacts to irrigated land and areas  
2 within Morrow County's urban growth boundary.

3  
4 Specifically, the certificate holder describes that the energy generated by proposed RFA4  
5 facility components would interconnect to a new 22-mile transmission line, permitted by  
6 Umatilla Electric Cooperative (UEC), located adjacent to the site generally traversing along  
7 Bombing Range Road. The new UEC transmission line is part of an energy corridor designed to  
8 minimize impacts to current and future agricultural usage in the area and consolidate the  
9 footprint of facilities that provide the public with utility services. The certificate holder also  
10 argues that proximity to Highway 207 and Bombing Range Road provide easy access for  
11 construction and ongoing maintenance and operations and thus no new roads need to be  
12 created that would further impact agricultural operations. The Department received and  
13 reviewed the certificate holder's contractual agreement for transmission service using the UEC  
14 line. Based on the proximity to the UEC line, and the executed contractual agreement to use  
15 the line, which interconnects to Bonneville Power Administration's (BPA) regional system, the  
16 Council concludes that this argument is a relevant reason justifying a Goal 3 exception.

17  
18 *Minimal Impacts to Cultivated Agricultural Lands*

19  
20 The certificate holder presents the current and historic agricultural uses of the site as a reason  
21 justifying a Goal 3 exception. Lands within the amended site boundary are non-irrigated.  
22 However, as presented in RFA4 Exhibit K Figure K-3, there is an area east of Bombing Range  
23 Road within the eastern portion of the proposed new site boundary area that maintains a junior  
24 water right (Water Right Permit G5092 and Certificate 62326). The water right authorizes  
25 irrigation for agricultural uses from the basalt groundwater reservoir. However, since 1986, the  
26 basalt groundwater reservoir has been a designated critical groundwater area (i.e. Butter Creek  
27 Critical Ground Water Area), where due to sustained declines in ground water availability for  
28 over 30 years, withdrawal allocations have been restricted to promote optimum use of the  
29 limited reservoir groundwater supply to stabilize water levels. In RFA4 Exhibit K, the certificate  
30 holder asserts that new applications for appropriation of water from the basalt groundwater  
31 reservoir within the Butter Creek Critical Area are not permitted.

32  
33 Accepted non-irrigated agricultural practices include weed control, field preparation, seed bed  
34 preparation, fertilization, and seeding or planting of Winter wheat. Some farmers may use  
35 helicopters and/or airplanes to aerially apply chemicals to a crop rather than using traditional  
36 ground-based equipment for application. Wheat farmers use a variety of ground-based  
37 equipment which are predominately less than 15 feet tall including tractors, plows, discs,  
38 fertilizer/pesticide applicators, combine harvesters, and other heavy machinery. However,  
39 certain implements, accessories, booms, or antennas may extend to heights greater than 15  
40 feet during normal operation. Agricultural fields are accessed by a network of public and private  
41 roads. Farm machinery is commonly driven on public roads between farms, while private roads  
42 and tracks provide access within properties and around fields. Some of these private access  
43 ways are fairly well developed roads, paved or graded gravel while others are rough two-track  
44 dirt paths. While the proposed RFA4 facility components may result in changes in field access or



1 patterns of cultivation, seeding, fertilizing and harvesting during construction, operational  
2 impacts to accepted farm practices are expected to be minimal. Moreover, the Council amends  
3 previously imposed Land Use Condition 11 (GEN-LU-04) and Land Use Condition 12 (GEN-LU-  
4 066) for further clarification of the certificate holder's obligation to consult with landowners to  
5 identify strategic facility component locations to minimize potential impacts to accepted farm  
6 practices on surrounding farm lands. Based on compliance with amended conditions, and  
7 selection of a site with non-irrigated agricultural practices, the Council concludes that this  
8 argument is a relevant reason justifying a Goal 3 exception.

9  
10 *Local Economic Benefits*

11  
12 The certificate holder presents that a reason justifying a Goal 3 exception includes the projects  
13 potential to provide local economic benefits by creating jobs and adding to the tax base.  
14 Construction and operation of proposed RFA4 facility components would provide additional  
15 benefits in the form of construction jobs, compensation to landowners via commercial  
16 contracts including leases, taxes, and community service fees.<sup>39</sup> The Council agrees that  
17 proposed RFA4 facility components would benefit the local economy through the stimulation of  
18 the local tax base, that payments would be directed to landowners, and that the solar array  
19 would create some new employment opportunities. Therefore, provided Council maintains that  
20 RFA4 provides sufficient evidence to support this reason, the Council concludes that this  
21 argument is a relevant "reason" justifying a Goal 3 exception.

22  
23 *Arguments That Do Not Qualify As "Reasons" to Justify a Goal 3 Exception*

24  
25 The certificate holder presents, as a reason justifying a Goal 3 exception, that lease payments  
26 would be issued to landowners for use of the land and would supplement the landowner's farm  
27 income. The certificate holder describes that supplemental lease payment would stabilize  
28 landowner income with a committed income source for approximately 30-50 years. The Council  
29 disagrees that supplemental lease payments represent a unique reason justifying a Goal 3  
30 exception.

31  
32 The certificate holder presents, as a reason justifying a Goal 3 exception, that agricultural lands  
33 would not be permanently precluded from agricultural production, and that the land would be  
34 returned to agricultural purposes following retirement and restoration. While effects of the  
35 land removal may not be "permanent" in a long time scale, such effects nonetheless sufficiently  
36 disturb land for an extended period of time. The Council therefore recommends that the  
37 Council conclude that the mere fact that the land may be returned for agricultural use, after its  
38 projected retirement after 50 years or more, is not a sufficient reason justifying a Goal 3  
39 exception for the proposed facility.

---

<sup>39</sup> WRWAMD4. RFA4 Exhibit K. 2019-07-01. In RFA4 Exhibit K, the certificate holder references information from the Oregon Business Development Commission and UEC in reference to an estimated addition of 20 to 25 new full-time jobs with average wages of \$60,000, generating 250 to 300 construction jobs and create substantial economic benefits to lease holders and surrounding communities. The Council does not consider this information as it appears it applies to the previously approved wind facility components.

The certificate holder presents, as a reason justifying a Goal 3 exception, that the farmland acreage to be impacted by proposed RFA4 facility components represents a de minimus percentage (0.07 percent of Winter wheat based on 2012 data obtained from USDA) of total farm use in Morrow County. The Council agrees that the certificate holder represents greater socioeconomic benefits from construction and operation of the proposed RFA4 facility components compared to the overall impact to Morrow County's agricultural resources from precluding land (proposed RFA4 facility component site) from current agricultural use, the Council disagrees, that the same arguments should apply to a reason deemed appropriate for granting a Goal 3 exception. The proposed RFA4 facility components would preclude approximately 813 acres of dryland Winter wheat (high-value farmland) from cultivation use, which is significantly more than the 12 and 20 acre thresholds established by LCDC when determining when a goal exception should be requested. The Council does not consider an argument based on acreage, when the goal exception threshold is based on acreage.<sup>40</sup>

#### Significant Environmental, Economic, Social and Energy Consequences

Under OAR 345-022-0030(4)(c)(B) and ORS 469.504(2)(c)(B), in order for the Council to determine whether to grant an exception to a statewide planning goal, the certificate holder must show that "the significant environmental, economic, social and energy consequences" of the proposed RFA4 facility components have been identified and mitigated in accordance with Council standards.

#### *Environmental Consequences*

Environmental consequences of construction and operation of proposed RFA4 facility components are evaluated in RFA4 Exhibit I (Soils), Exhibit J (Wetlands), Exhibit L (Protected Areas), Exhibit P (Fish and Wildlife), Exhibit Q (Threatened and Endangered Species), Exhibit R (Scenic Resources), and Exhibit S (Cultural Resources). These exhibits demonstrate that the proposed changes in RFA4 would not cause significant adverse environmental consequences. Indeed, by and large, the proposed changes will avoid impacts to such resources altogether. Potential impacts to wildlife habitat will be mitigated based on habitat categorization, as is required under Oregon Department of Fish and Wildlife policy (see Exhibit P). Impacts to soils, wetlands, protected areas, water resources, threatened and endangered species, scenic and aesthetic resources, and historic, cultural, and archaeological resources from proposed RFA4 facility components are not anticipated to be significant or adverse. The Council finds that

---

<sup>40</sup> SRWAMD4. DPO Special Advisory Group Comment. Morrow County Board of Commissioners. 2019-09-06. The Morrow County Board of Commissioners, on behalf of Carla McLane, Morrow County Planning Director, as the SAG appointed for the facility, recommended this reason be considered in the Goal 3 exception because it is used to support the socioeconomic analysis, also evaluated under the Goal 3 exception process. The SAG is silent on whether it agrees with the de minimus argument, and only suggests it be considered for consistency with the socioeconomic consequence analysis. For the reasons described above, the Council maintains that the de minimus reason not be considered in the Goal 3 reasons exception.

1 proposed RFA4 facility components would not result in significant environmental  
2 consequences.

3  
4 *Socioeconomic Consequences*  
5

6 Socioeconomic consequences from construction and operation of proposed RFA4 facility  
7 components are not expected to be adverse. As evaluated in this order, construction and  
8 operation of proposed RFA4 facility components would not result in potentially significant  
9 adverse impacts on scenic resources; cultural, historical, archeological resources (with  
10 mitigation); or recreational resources. Exhibit U (Public Services) demonstrates that proposed  
11 RFA4 facility components would not have significant adverse impacts on community services  
12 such as housing, sewer, water supply, waste disposal, health care, education, and  
13 transportation. As discussed above, construction and operation of proposed RFA4 facility  
14 components would create jobs and contribute income to Morrow County.  
15

16 Benefits should be measured against the relatively small amount of agricultural  
17 activity that will be displaced during construction and operation. The certificate holder  
18 represents that lease payments would be provided to landowners that would supplement  
19 farmers' income without significantly reducing the land base available for farming  
20 practices. Similarly, although some farming would be displaced where certain portions of the  
21 proposed RFA4 facility components would be located, proposed facility component locations  
22 would be compatible with area farming through implementation of existing and recommended  
23 amended conditions.  
24

25 *Energy Consequences*  
26

27 Proposed RFA4 facility components would provide a reliable source of electricity with no fuel  
28 cost and no associated emissions for at least 30 years. As discussed under MCZO 6.025 and  
29 throughout this order, construction and operation of proposed RFA4 facility components would  
30 not adversely affect any farming operations in the general area. The Council finds that  
31 construction and operation of proposed RFA4 facility components would not result in  
32 significant adverse economic consequences.  
33

34 *Compatibility of Adjacent Uses*  
35

36 The proposed use would be compatible with adjacent agricultural uses, as it would not  
37 significantly limit or impact current or future farm activities on the surrounding land, and would  
38 not diminish the opportunity for neighboring parcels to expand, purchase, or lease any vacant  
39 land available for farming. Existing and recommended amended conditions would ensure  
40 proposed RFA4 facility components maintain compatibility with adjacent land uses.  
41

42 *Goal 3 Conclusion of Law*  
43

Based on the foregoing findings and evidence in the record, the Council grants a Goal 3 exception for the portion of the proposed amended site boundary that would be occupied with proposed RFA4 facility components, subject to compliance with the recommended amended and existing site certificate conditions.

### **Conclusions of Law**

Based on the foregoing findings and the evidence in the record, and subject to compliance with the conditions, the Council finds that an exception to Goal 3 is justified under OAR 345-022-0030(4)(c) and ORS 469.504(2)(c); and that proposed RFA4 facility components would comply with OAR 660-033-0130(38)(i) and complies with the applicable statewide planning goal (Goal 3). As such, subject to the conditions, the Council finds that proposed RFA4 facility components would comply with the Council's Land Use standard.

### **III.F. Protected Areas: OAR 345-022-0040**

*(1) Except as provided in sections (2) and (3), the Council shall not issue a site certificate for a proposed facility located in the areas listed below. To issue a site certificate for a proposed facility located outside the areas listed below, the Council must find that, taking into account mitigation, the design, construction and operation of the facility are not likely to result in significant adverse impact to the areas listed below. References in this rule to protected areas designated under federal or state statutes or regulations are to the designations in effect as of May 11, 2007:*

*(a) National parks, including but not limited to Crater Lake National Park and Fort Clatsop National Memorial;*

*(b) National monuments, including but not limited to John Day Fossil Bed National Monument, Newberry National Volcanic Monument and Oregon Caves National Monument;*

*(c) Wilderness areas established pursuant to The Wilderness Act, 16 U.S.C. 1131 et seq. and areas recommended for designation as wilderness areas pursuant to 43 U.S.C. 1782;*

*(d) National and state wildlife refuges, including but not limited to Ankeny, Bandon Marsh, Baskett Slough, Bear Valley, Cape Meares, Cold Springs, Deer Flat, Hart Mountain, Julia Butler Hansen, Klamath Forest, Lewis and Clark, Lower Klamath, Malheur, McKay Creek, Oregon Islands, Sheldon, Three Arch Rocks, Umatilla, Upper Klamath, and William L. Finley;*

*(e) National coordination areas, including but not limited to Government Island, Ochoco and Summer Lake;*

1           (f) National and state fish hatcheries, including but not limited to Eagle Creek and  
2           Warm Springs;

3  
4           (g) National recreation and scenic areas, including but not limited to Oregon Dunes  
5           National Recreation Area, Hell's Canyon National Recreation Area, and the Oregon  
6           Cascades Recreation Area, and Columbia River Gorge National Scenic Area;

7  
8           (h) State parks and waysides as listed by the Oregon Department of Parks and  
9           Recreation and the Willamette River Greenway;

10  
11           (i) State natural heritage areas listed in the Oregon Register of Natural Heritage  
12           Areas pursuant to ORS 273.581;

13  
14           (j) State estuarine sanctuaries, including but not limited to South Slough Estuarine  
15           Sanctuary, OAR Chapter 142;

16  
17           (k) Scenic waterways designated pursuant to ORS 390.826, wild or scenic rivers  
18           designated pursuant to 16 U.S.C. 1271 et seq., and those waterways and rivers listed  
19           as potentials for designation;

20  
21           (l) Experimental areas established by the Rangeland Resources Program, College of  
22           Agriculture, Oregon State University: the Prineville site, the Burns (Squaw Butte) site,  
23           the Starkey site and the Union site;

24  
25           (m) Agricultural experimental stations established by the College of Agriculture,  
26           Oregon State University, including but not limited to: Coastal Oregon Marine  
27           Experiment Station, Astoria Mid-Columbia Agriculture Research and Extension  
28           Center, Hood River Agriculture Research and Extension Center, Hermiston Columbia  
29           Basin Agriculture Research Center, Pendleton Columbia Basin Agriculture Research  
30           Center, Moro North Willamette Research and Extension Center, Aurora East Oregon  
31           Agriculture Research Center, Union Malheur Experiment Station, Ontario Eastern  
32           Oregon Agriculture Research Center, Burns Eastern Oregon Agriculture Research  
33           Center, Squaw Butte Central Oregon Experiment Station, Madras Central Oregon  
34           Experiment Station, Powell Butte Central Oregon Experiment Station, Redmond  
35           Central Station, Corvallis Coastal Oregon Marine Experiment Station, Newport  
36           Southern Oregon Experiment Station, Medford Klamath Experiment Station, Klamath  
37           Falls;

38  
39           (n) Research forests established by the College of Forestry, Oregon State University,  
40           including but not limited to McDonald Forest, Paul M. Dunn Forest, the Blodgett  
41           Tract in Columbia County, the Spaulding Tract in the Mary's Peak area and the  
42           Marchel Tract;

(o) Bureau of Land Management areas of critical environmental concern, outstanding natural areas and research natural areas;

(p) State wildlife areas and management areas identified in OAR chapter 635, Division 8.

\*\*\*

(3) The provisions of section (1) do not apply to transmission lines or natural gas pipelines routed within 500 feet of an existing utility right-of-way containing at least one transmission line with a voltage rating of 115 kilovolts or higher or containing at least one natural gas pipeline of 8 inches or greater diameter that is operated at a pressure of 125 psig.

### **Findings of Fact**

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. Impacts to protected areas are evaluated based on identification of protected areas, pursuant to OAR 345-022-0040, within the analysis area and an evaluation of the following potential impacts during facility construction and operation: excessive noise, increased traffic, water use, wastewater disposal, visual impacts of facility structures or plumes, and visual impacts from air emissions.

In accordance with OAR 345-001-0010(59)(e) and consistent with the study area boundary, the analysis area for protected areas is the area within and extending 20 miles from the site boundary. RFA4 proposes to expand the site boundary; therefore, the analysis area includes the area within and extending 20-miles from the proposed amended site boundary.

In RFA4, the certificate holder references 16 protected areas within the analysis area, all of which were previously identified and evaluated by Council in the 2017 *Final Order on ASC*. These protected areas are presented in Table 3, *Protected Areas within Facility Analysis Area and Distance from Site Boundary* below.

**Table 3: Protected Areas within Facility Analysis Area and Distance from Amended Site Boundary**

Protected Area (OAR Reference)	Distance from Amended Site Boundary (in miles)
Lindsay Prairie Preserve (345-022-0040(1)(i))	0.1
Boardman RNA (Research Natural Area) (345-022-0040(1)(o))	2.3
Oregon Trail ACEC (Area of Critical Environmental Concern) (345-022-0040(1)(o))	2.7

**Table 3: Protected Areas within Facility Analysis Area and Distance from Amended Site Boundary**

Protected Area (OAR Reference)	Distance from Amended Site Boundary (in miles)
Oregon State University Agriculture Research and Extension Center, Hermiston (345-022-0040(1)(m))	9
Cold Springs National Wildlife Refuge (345-022-0040(1)(d))	13
Three Mile Adult Hold Fish Hatchery (345-022-0040(1)(f))	13.5
Coyote Springs Wildlife Management Area (345-022-0040(1)(p))	14
Umatilla National Wildlife Refuge (345-022-0040(1)(d))	14
Power City Wildlife Management Area (345-022-0040(1)(p))	14.5
Horn Butte Curlew ACEC (345-022-0040(1)(o))	15
Hat Rock State Park (345-022-0040(1)(h))	16.5
Irrigon Wildlife Management Area (345-022-0040(1)(p))	16.5
Irrigon Hatchery (345-022-0040(1)(f))	17.5
McNary National Wildlife Refuge (345-022-0040(1)(d))	18
Willow Creek Wildlife Management Area (345-022-0040(1)(p))	18
Umatilla Hatchery (345-022-0040(1)(f))	20
Source: WRWAPPDoc139-20. ASC Exhibit T. 2015-07-01.	

As presented in Table 3, *Protected Areas within Facility Analysis Area and Distance from Amended Site Boundary*, the majority of the listed protected areas are located at least 15 miles from the proposed amended site boundary. The protected areas closest to the amended site boundary include the Lindsay Prairie Preserve (<0.1 mile), Boardman Research Natural Area (2.3 miles), and Oregon Trail Area of Critical Environmental Concern (2.7 miles). Potential adverse impacts to protected areas during construction and operation of proposed RFA4 facility components from noise, traffic, water use and wastewater disposal, and visual are discussed below.

#### *Potential Noise Impacts*

1 The significance of potential noise impacts to identified protected areas is based on the  
2 magnitude and likelihood of the impact on the affected human population or natural resource  
3 that uses the protected area.<sup>41</sup> The nearest protected area, Lindsay Prairie Preserve is a site  
4 managed to protect native grassland and wildlife habitat. Based on this function and purpose,  
5 the Lindsay Prairie Preserve could be affected if adverse noise levels from the proposed RFA4  
6 facility components were audible. Potential noise impacts at the Lindsay Prairie Preserve from  
7 construction and operation of proposed RFA4 facility components are evaluated below.

#### 8 9 *Construction*

10  
11 Construction of proposed RFA4 facility components would generate short-term, temporary  
12 noise. Noise generating activities during construction could result from the use of heavy  
13 machinery, such as heavy trucks, bulldozers, graders and cranes. The nearest protected area to  
14 the proposed amended site boundary is the Lindsay Prairie Preserve; however, the protected  
15 area would be located at a distance of 1.4 miles from proposed RFA4 facility components and  
16 construction related activities. Existing Noise Control Condition 1 (CON-NC-01) would reduce  
17 noise impacts during construction by requiring the use of exhaust mufflers on combustion  
18 engine-powered equipment, use of air-inlet silencers, shrouds and shields, as appropriate; and  
19 requires that the certificate holder establish a noise complaint response system, including a  
20 system for the certificate holder to receive and resolve noise complaints.

21  
22 The Council finds that proposed RFA4 facility components would not be likely to result in  
23 significant adverse noise impacts at the Lindsay Prairie Preserve based on attenuation due to  
24 distance. Because the other protected areas within the analysis area are located at greater  
25 distances from the proposed amended site boundary than the Lindsay Prairie Preserve, the  
26 Council concludes that potential construction-related noise impacts from proposed RFA4 facility  
27 components at these protected areas would also not likely be potentially significant or adverse.

#### 28 29 *Operation*

30  
31 Operation of proposed RFA4 facility components would generate noise from transformers and  
32 inverters associated with the solar arrays, and inverters and cooling systems associated with  
33 the distributed battery storage systems. In RFA4, the certificate holder provides a noise analysis  
34 inclusive of the facility, as approved, and the operational sources and sound power levels (in A-  
35 weighted decibels [dBA]) for proposed RFA4 facility components, as listed below:

---

<sup>41</sup> 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. OAR 345-001-0010(53) defines "significant" as: "having an important consequence, either alone or in combination with other factors, based upon the magnitude and likelihood of the impact on the affected human population or natural resources, or on the importance of the natural resources affected, considering the context of the action or impact, its intensity and the degree to which possible impacts are caused by the proposed action. Nothing in this definition is intended to require a statistical analysis of the magnitude or likelihood of a particular impact."



- 41 inverters, each at 73 dBA
- 41 distribution transformers, each at 77 dBA
- 1 substation transformer at 98 dBA
- 81 heating, ventilation and air conditioning units, each at 85 dBA

For its analysis, the certificate holder used the Computer Aided Noise Abatement (CadnaA) software program, version 2018 MR1 to make the predictions of peak noise levels at noise-sensitive receptors within the analysis area. The program includes sound propagation factors adopted from International Organization for Standardization's (ISO) 9613-2 "Attenuation of Sound during Propagation Outdoors" to account for geometric divergence, atmospheric absorption, reflection from surfaces, screening by topography and obstacles, terrain complexity and ground effects, source directivity factors, seasonal foliage effects, and meteorological conditions.<sup>42</sup> Topographical information was imported into the acoustic model using the official U.S. Geological Survey (USGS) digital elevation dataset to accurately represent terrain in three dimensions. Terrain conditions, vegetation type, ground cover, and the density and height of foliage can also influence the absorption that takes place when sound waves travel over land.

Based on noise modeling presented in RFA4 Exhibit X, operational noise from the facility, as approved and with proposed RFA4 facility components, the closest important recreational opportunity – the Oregon Trail Well Spring Interpretive Site - would experience potential operational sound levels of 31 dBA, comparable to a whisper or wind blowing. Council previously concluded that audible noise levels of 31 dBA would not interfere with the recreational opportunities of the Oregon Trail Well Spring Interpretive Site. Therefore, consistent with Council's previous findings, the Council finds that operation of the facility, with proposed changes, would not be likely to result in significant adverse noise impacts to any important recreational opportunities within the analysis area.

In RFA4 Exhibit L, the certificate holder asserts that operational noise levels from proposed RFA4 facility components individually and considered with the facility, as approved, would be inaudible at all protected areas other than the Lindsay Prairie Preserve where potential operational sound levels between 36 to 54 dBA are anticipated. Council previously concluded that audible noise levels between 36 to 54 dBA would not interfere with the primary purpose of the protected area (i.e. habitat preservation). Therefore, based on the Council's previous findings and the certificate holder's updated noise modeling assessment demonstrating that operational noise from the facility, with proposed changes, would be similar to or less than 54 dBA, the Council finds that operation of the facility, with proposed changes, would not be likely to result in significant adverse noise impacts to any protected areas within the analysis area.

### *Potential Traffic Impacts*

#### *Construction*

---

<sup>42</sup> WRWAMD4Doc14-25 RFA4 Complete RFA4 Exhibit X. Noise Final, Section 5.2.1. 2019-07-01.

1 Construction of proposed RFA4 facility components would generate construction-related traffic.  
2 In RFA4 Exhibit U, the certificate holder explains that construction of proposed RFA4 facility  
3 components would not result in more than 250 workers and that construction of the previously  
4 approved wind facility and proposed solar facility components would not be expected to  
5 overlap, or that if there were overlapping construction activities, estimated daily passenger car  
6 equivalents would not result in greater impacts than those evaluated in the *Final Order on the*  
7 *ASC* – which evaluated impacts from up to 360 workers per day.

8  
9 Construction vehicles associated with proposed RFA4 facility components would utilize I-84,  
10 OR-207 and local county roads during construction. All but five of the protected areas are  
11 located north of I-84 and therefore, those areas would be largely unaffected by temporary  
12 traffic impacts generated during facility construction. Of the five protected areas south of I-84,  
13 only the Boardman Research Natural Area (RNA) and Lindsay Prairie Preserve are likely to  
14 experience impacts from construction-related traffic of the facility. Council previously imposed  
15 Public Services Condition 6 (PRE-PS-01) requiring that the certificate holder implement a Traffic  
16 Management Plan, as approved by the Department, that would include best management  
17 practices (BMP's) such as traffic control BMP's and reduction practices to minimize potential  
18 construction-related traffic impacts.

19  
20 Based on the level of construction-related traffic and compliance with Public Services Condition  
21 6 (PRE-PS-01), the Council finds that construction-related traffic impacts would not be likely to  
22 result in a significant adverse traffic impact to protected areas within the analysis area.

#### 23 24 *Operation*

25  
26 Operation of proposed RFA4 facility components would generate minimal operational-related  
27 traffic. The facility, with proposed changes, would result in 10 to 15 permanent employees.  
28 Based on the low level of permanent employees, the Council finds that operational-traffic  
29 impacts would continue not to be likely to result in a significant adverse impact to protected  
30 areas within the analysis area.

#### 31 32 *Potential Water Use Impacts – Construction and Operation*

33  
34 As explained in RFA4 Exhibit O, construction of proposed RFA4 facility components would result  
35 in use of approximately 36.3 million gallons over an approximately 12-month period for dust  
36 suppression, concrete mixing (solar module and transformer pad foundations), and road  
37 construction (grading and compaction). The certificate holder estimates that monthly and daily  
38 water demand would result in 3 million gallons and 116, 647 gallons, respectively. If  
39 construction of proposed RFA4 facility components overlap with construction of previously  
40 approved wind facility components, the certificate holder estimates that construction related  
41 water use could result in 92.8 million gallons over a 12-month period, or 7.7 million gallons per

1 month. During operation of proposed RFA4 facility components, water use could include solar panel washing, estimated at 325,125 gallons per wash.<sup>43</sup>

The certificate holder intends to obtain water necessary for construction and operation of proposed RFA4 facility components from municipal sources. Because construction and operational water use from proposed RFA4 facility components would not result in withdrawal from any protected area, the Council finds that the proposed facility modifications would not be likely to result in significant adverse impacts from water use within any protected area.

#### *Potential Wastewater Disposal Impacts – Construction and Operation*

Construction of proposed RFA4 facility components would generate sanitary wastewater and concrete washwater during concrete production for foundations. Council previously imposed Waste Minimization Condition 2 (PRE-WM-01) and Public Service Condition 3 (CON-PS-01) requiring that the certificate holder, prior to construction, develop a waste management plan, to be implemented during construction. The conditions require that the plan include measures for recycling and segregating waste, and discharging concrete wash water onsite, when possible. Based on the low level of construction-related waste and waste water anticipated during construction, and compliance with previously imposed conditions, the Council finds that proposed RFA4 facility components would minimize wastewater, resulting in minimal adverse impacts on surrounding and adjacent areas from construction of proposed RFA4 facility components.

In RFA4 Exhibit V, the certificate holder identifies solar panel washwater as wastewater; however, the Council would not consider solar panel washwater as wastewater that could impact surrounding areas as no soaps, detergents, or additives would be allowed for use in the washwater. Based on the minimal amounts of wastewater generated during operation, the Council finds that proposed RFA4 facility components would result in minimal adverse impacts on surrounding and adjacent areas from operation of proposed RFA4 facility components.

#### *Visual Impacts of Facility Structures*

Proposed RFA4 facility components include solar panels, overhead 34.5 kV collector lines and skid-mounted inverters and transformers, with the solar panels representing the most dominant visual element of the proposed components. Solar modules would be mounted on a tracking system that rotates the modules throughout the day as the sun's angle changes, with a maximum height of 16 feet at full tilt. The movement of the modules, combined with their antireflective coating, would minimize glare but would be expected to have the overall appearance of a dark line on the horizon. Inverter boxes associated with the proposed battery storage systems would be approximately 12 feet wide, 36 feet long, and 10 feet tall.

---

<sup>43</sup> WRWAMD4Doc14-16 RFA4 Complete RFA4 Exhibit O. Water Req Final, Section 2.2. 2019-07-01.

1 Aboveground 34.5 kV collector line structures would be wooden or steel monopole, extending  
2 approximately 60 feet in height.

3  
4 In RFA4, the certificate holder provides a zone of visual influence (ZVI) analysis to assess  
5 potential visual impacts to important recreational opportunities. The ZVI analysis evaluated the  
6 landscape using digital bare earth modeling, removing landscape features for a “worse-case”  
7 visibility scenario. Based on the certificate holder’s ZVI analysis, as presented in Figure 4:  
8 *Viewshed Impacts of Proposed RFA4 Facility Components*, proposed RFA4 facility components  
9 would be potentially visible from three protected areas including the Lindsay Prairie Preserve (0  
10 miles), Boardman RNA (2.3 miles), and the Oregon Trail ACEC (2.7) miles.

11  
12 *Lindsay Prairie Preserve*

13  
14 Lindsay Prairie Preserve is less than one mile away from the proposed amended site boundary  
15 and is managed for vegetation and wildlife preservation. The site is not managed for its scenic  
16 qualities. Because of the intent of management as a habitat preserve, the Council previously  
17 found that the visual impact of the facility at the Lindsay Prairie Preserve would not likely result  
18 in a significant adverse impact to this protected area. Therefore, the Council continues to  
19 conclude that even if there were potential visibility of proposed RFA4 facility components at  
20 this resource, that the resource could not be impacted by visibility.

21  
22 *Boardman Research Natural Area (RNA)*

23  
24 The Boardman RNA is located approximately 2.3 miles from the site boundary and is managed  
25 primarily for the preservation of vegetation and wildlife. The site is entirely located within the  
26 Boardman Bombing Range, is not managed for its scenic values, nor is there the allowance of  
27 public access. Additionally, the existing viewshed includes transmission lines, wind turbines,  
28 and agricultural irrigation equipment, therefore, the Council previously found that the visual  
29 impact of the facility at the Boardman RNA would not likely result in a significant adverse  
30 impact to this protected area. Therefore, the Council continues to conclude that even if there  
31 were potential visibility of proposed RFA4 facility components at this resource, that the  
32 resource could not be impacted by visibility.

33  
34 *Oregon Trail Area of Critical Environmental Concern (ACEC), Echo Meadows*

35  
36 The Oregon Trail ACEC is approximately 2.7 miles from the site boundary and is managed by the  
37 Bureau of Land Management (BLM) to preserve scenic quality under the BLM Visual Resource  
38 Management system; however, there are no designated views or viewsheds associated with  
39 the ACEC. The existing viewshed at Echo Meadows contains transmission lines and wind  
40 turbines. The Council previously found that while facility components would result in a change  
41 to the existing viewshed of the Oregon Trail ACEC site, there are no specified management  
42 plans of scenic or visual qualities, and there is the presence of similar structures within the  
43 existing viewshed, the visual impacts of construction and operation of the facility would not  
44 likely result in a significant adverse impact to this protected area.

Based on the ZVI analysis, while potential visibility of proposed RFA4 facility components was identified, the certificate holder asserts that the likelihood of visibility is low given an approximate 2.7-mile distance between the resource and proposed RFA4 facility components.

For the protected areas identified, the Council finds that the visual impacts of proposed RFA4 facility components would not result in a significant adverse impact to these protected areas.

#### *Visual Impacts from Air Emissions*

There would be no air emissions from the proposed RFA4 facility components and therefore no related visual impacts.<sup>44</sup>

#### **Conclusions of Law**

Based on the foregoing findings, the Council finds that the design, construction and operation of proposed RFA4 facility would not be likely to result in significant adverse impacts to any protected areas, in compliance with the Council's Protected Area standard.

#### **III.G. Retirement and Financial Assurance: OAR 345-022-0050**

*To issue a site certificate, the Council must find that:*

*(1) The site, taking into account mitigation, can be restored adequately to a useful, non-hazardous condition following permanent cessation of construction or operation of the facility.*

*(2) The applicant has a reasonable likelihood of obtaining 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.*

#### **Findings of Fact**

The Retirement and Financial Assurance standard requires a finding that the facility site can be restored to a useful, non-hazardous condition at the end of the facility's useful life, should either the certificate holder stop construction or should the facility cease to operate.<sup>45</sup> In addition, it requires a demonstration that the certificate holder can obtain 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.

#### *Restoration of the Site Following Cessation of Construction or Operation*

---

<sup>44</sup> WRWAPDoc196 Final Order on ASC, p. 154. 2017-05-24.

<sup>45</sup> OAR 345-022-0050(1).

OAR 345-022-0050(1) requires the Council to find that the site of proposed RFA4 facility components can be restored to a useful non-hazardous condition at the end of the facility components' useful life, assumed to extend 50 years.

In RFA4, the certificate holder describes the tasks and actions necessary to restore the site of proposed RFA4 facility components to a useful, nonhazardous condition. The tasks and actions would include removal of all facilities and foundations, site restoration and revegetation. Specifically, perimeter fencing, the collector substation, module supports, modules, inverters, transformers, distributed energy storage systems and inverter and transformer foundations would be entirely removed from the site and transported to a licensed recycling or disposal facility.<sup>46</sup> Underground collector lines at depths of 3 feet or greater would be abandoned in place, but lateral runs would be removed. All permanently and temporarily disturbed areas would be revegetated to a vegetation level comparable with surrounding land uses. Council previously imposed Land Use Condition 23 (OPR-LU-03) and 27 (OPR-LU-06) which allow for the Department and Morrow County to review a decommissioning plan prior to implementation; and, require landowner consultation prior to decommissioning. These conditions provide an opportunity for the Department, Morrow County and landowners to determine appropriate subgrade foundation removal, if other than the depths evaluated.<sup>47</sup>

In Section III.B., *Organizational Expertise* of this order, the Council finds that the certificate holder has the organizational expertise to construct, operate, and retire proposed RFA4 facility components in compliance with the standard. In addition, the Council finds that the certificate holder would continue to satisfy the requirements of the Soil Protection, Fish and Wildlife Habitat, and Waste Minimization standards (Sections III.D., III.H. and III.N. of this order, respectively). Each of those sections describes existing and recommended amended conditions designed to minimize adverse impacts on the surrounding land from construction and operation of the components proposed in the amendment request. In addition, Council previously imposed conditions obligating the certificate holder to prevent the development of conditions (R&FA Condition 1 [GEN-RF-01]; R&FA Condition 2 [RET-RF-01]; R&FA Condition 3 [RET-RF-02]) on the site that would preclude restoration.

---

<sup>46</sup> WRWAMD4. DPO Certificate Holder Comments. 2019-09-09. On the record of the draft proposed order, NextEra Energy (certificate holder) clarified that an additional \$240k should be included in the retirement estimate to account for transport and disposal of solar panel post foundation, if placed in concrete, which was incorporated into the proposed order (see Table 4 of the order).

<sup>47</sup> WRWAMD4. DPO Special Advisory Group Comments McLane. 2019-09-06. In comments on the draft proposed order, the SAG commented that based on consultation with staff at Oregon State University's Extension Program, there may be differences in appropriate depths for foundation removal, such as 6-feet versus 3-feet, in areas historically used for Winter Wheat production. Based on potential changes in science and understanding of root depth, the SAG recommended that Council impose a condition requiring that, upon facility decommissioning, the certificate holder be required to seek further expertise on farming practices to confirm adequate depths for foundation removal. In response, the certificate holder argued that previously imposed conditions would achieve the outcome requested, which as described above, the Council considers new or amended conditions unnecessary.

Based upon compliance with existing conditions, the Council finds that the site of proposed RFA4 facility components could be adequately restored to a useful, non-hazardous condition following permanent cessation of construction or operation.

#### *Estimated Cost of Site Restoration*

OAR 345-022-0050(2) requires the Council to find that the certificate holder has a reasonable likelihood of obtaining a bond or letter of credit in a form and *amount* necessary to restore the site of proposed RFA4 facility components to a useful non-hazardous condition [Emphasis added].

In RFA4, the certificate holder provides a site restoration cost estimate for proposed RFA4 facility components of approximately \$7.7 million (Q4 2018 dollars). The site restoration cost estimate was prepared by TetraTech, the certificate holder's consultant. The scope of work and individual tasks were established using professional experience, in collaboration with the certificate holders' engineering staff and contractors. Production rates were based on professional knowledge and published standards, including review of "RS Means," a construction cost estimating software. Labor and equipment rates were obtained based on U.S. Department of Labor wage determinations. Typical industry standards were applied for contingency, overhead and fee.

As presented in RFA4 Exhibit W, the certificate holder evaluated labor requirements, equipment needs and duration for each of the tasks and actions identified for site restoration based on the following methods and assumptions:

- Labor costs include base wage, fringe, and payroll tax liability. The final rate used in the estimate is an average of 40 hours of standard time and 10 hours of overtime per week, assuming a 50-hour work week during construction activities.
- Equipment rates used in the estimate are developed by reviewing rates published by RS Means and historical vendor quotes. Rates include fuel, maintenance, and wear and tear of ground engaging components.
- Mobilization and demobilization costs are estimated to be approximately 2 percent of the overall contractor's costs.
- Restoration is estimated on a unit cost basis, priced by task that follows the progression of work from start to finish, as illustrated in RFA4 Exhibit W Attachment W-1. Unit costs are developed by including the labor, equipment, and production rate required for each individual task. RS Means and estimator experience are utilized to establish the crew, equipment, and production for each individual task. Several other miscellaneous costs have been approximated, including permits, engineering, signage, fencing, traffic control, utility disconnects, etc.
- Roads would be restored pursuant to the Council-approved Retirement Plan so that they become a part of the natural surroundings and are no longer recognizable or

usable as a road. On private lands, roads would be restored at the request of the current landowner.

- Removal of temporary facilities are included in the restoration cost. These include an office trailer, two Conex storage units, portable toilets, first aid supplies, and utilities.
- Field management during construction activities are included and account for one Superintendent, one Health & Safety Representative and two Field Engineers.
- A contractor's Home Office, Project Management, Overhead, and Fee can vary widely by contractor. As such, averages were developed for the estimate and added as a percentage of total cost. These include 5 percent for Home Office and Project Management, 5 percent Contingency, and 15 percent for Overhead and Fee.<sup>48</sup>

Based on this information, the Council concludes that the certificate holder's consultant, TetraTech, has the experience necessary to adequately and accurately prepare a cost estimate for decommissioning and restoration of the proposed RFA4 facility components, as presented in Table 4, *Proposed RFA4 Decommissioning and Site Restoration Cost Estimate*.

**Table 4: Proposed RFA4 Decommissioning and Site Restoration Cost Estimate**

Task or Action	Quantity	Unit Cost	Unit	Estimate
<i>Site Mobilization</i>				
Equipment Mobilization	14	\$4,371	No. of equipment	\$61,200
Site Facilities	4	\$550	No. of equipment	\$2,200
Crew Mobilization and Site Setup	3	\$12,065	Days	\$36,197
Crew Demobilization and Site Cleanup	2	\$12,065	Days	\$24,131
Temporary Site Facilities	8	\$2,155	Months	\$17,240
Field Management	32	\$21,851	Days	\$699,255
Subtotal =				\$840,223
<i>Wheatridge West Collector Substation</i>				
Fence Removal	30	\$40	Labor Hours	\$1,202
Transformer Removal	2	\$91,639	No. of equipment	\$183,278
Control Building Removal	1	\$2,432	No. of equipment	\$2,432
Underground Utility and Ground Removal	2	\$1,202	Days	\$2,404
Foundation Removal	500	\$27	Cubic Yards	\$13,512
Material Disposal	1	\$1,675	Per Trip + Fee	\$1,675
Restoration	4	\$16,650	Acre	\$66,603
Subtotal =				\$271,106
<i>Solar Array and DC-Coupled Battery Storage</i>				

<sup>48</sup> WRWAMD4Doc14-24 RFA4 Complete RFA4 Exhibit W. Retirement Final, Section 4.2. 2019-07-01.



**Table 4: Proposed RFA4 Decommissioning and Site Restoration Cost Estimate**

<b>Task or Action</b>	<b>Quantity</b>	<b>Unit Cost</b>	<b>Unit</b>	<b>Estimate</b>
Fence Removal	102,496	\$0.93	Linear Feet	\$95,321
Inverter/Transformer Removal	41	\$5,780	No. of equipment	\$236,980
Foundation Removal	41	\$2,594	No. of equipment	\$106,368
Panel Removal	417,093	\$4.61	No. of equipment	\$1,921,678
Rack and Post Removal	6,000	\$251	No. of equipment	\$1,507,116
Post Foundation Removal and Disposal	20,000	\$11.97	Cubic Yards	\$239,400
Battery Removal and Disposal	41	\$10,793	No. of equipment	\$442,532
Trucking	7	\$1,375	Per Trip	\$9,625
Disposal Fee	130	30	Per Ton	\$3,900
Restoration <sup>1</sup>	246	\$2,771	Acres	\$681,736
Subtotal =				\$5,244,656
<i>Contractor Fees and Contingencies</i>				
Project Management – 5% of Decommissioning Cost				\$317,799
Contractor Contingency – 5% of Cost				\$333,689
Contractor Overhead and Fee – 15% of Cost				\$1,051,121
Subtotal =				\$1,702,609
RFA4 Decommissioning Subtotal =				\$8,058,594
<i>ODOE Applied Contingencies<sup>2</sup></i>				
1% Performance Bond				\$80,585
10% Administration and Project Management				\$805,859
10% Future Development Contingency				\$805,859
ODOE Contingency Subtotal =				\$1,692,305
Total RFA4 Decommissioning Cost Estimate, Adjusted with ODOE Contingencies (4 <sup>th</sup> Qtr 2018 Dollars) =				\$9,750,899
Notes:				
<ol style="list-style-type: none"> <li>Restoration assumes that 27 acres of areas impacted by roads would be reseed and 10 percent of the area disturbed from solar panel posts would be reseeded, as vegetation between posts would be maintained during facility operational life.</li> <li>The Council applies additional contingencies, consistent with those applied to the approved facility, as follows: <ol style="list-style-type: none"> <li>1% to account for the cost of a performance bond that would be posted by the contractor as assurance that the work will be completed as agreed.</li> <li>10% for the Department's administrative and management expenses, if the certificate holder was unable to fulfil its decommissioning obligation and the Department and State were responsible for facility decommissioning.</li> <li>10% for future uncertainties such as changes in environmental standards or other legal requirements, availability of disposal sites, and the cost of labor and equipment.</li> </ol> </li> </ol>				
Source: RFA4 Exhibit W Attachment W-1.				

Based on the certificate holder's methodology and assumptions, the Council considers that \$8.0 million (Q4 2018 dollars) is a reasonable estimate of an amount satisfactory to restore the site of proposed RFA4 facility components to a useful, non-hazardous condition. In addition, though, and consistent with the decommissioning estimate for the facility, as approved, the Council adds contingency costs for future development, administration and project management cost, and cost for maintaining a performance bond. The 10 percent future development contingency accounts for uncertainty in the decommissioning estimate. If site restoration becomes necessary, it might be many years in the future where there is uncertainty of continued adequacy of the retirement cost estimate. Uncertainty factors include different environmental standards or other legal requirements; and, changes in cost of labor and equipment that increase at a rate exceeding the standard inflation adjustment. The 10 percent contingency for administrative and management expenses are the anticipated direct costs borne by the State in the course of managing site restoration and would include the preparation and approval of a final retirement plan, obtaining legal permission to proceed with demolition of the facility, legal expenses for protecting the State's interest, preparing specification bid documents and contracts for demolition work, managing the bidding process, negotiations of contracts, and other tasks. Based on the adjustments from contingencies, the Council finds that \$9.7 million (Q4 2018 dollars) is a reasonable estimate of an amount satisfactory to restore the site of proposed RFA4 facility components to a useful, nonhazardous condition. To account for changes in the bond or letter of credit amount necessary to provide to the Department prior to construction, the Council amends Retirement and Financial Assurance Condition 5 (PRE-RF-02) as follows:

**Amended Retirement and Financial Assurance Condition 5 (PRE-RF-02):** Before beginning construction of the:

- 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 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:
- 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 \$9.7 million dollars (Q4 2018 dollars), to be adjusted to the date of issuance based on the unit costs presented in Table 4 of the Final Order on RFA4, and adjusted on an annual basis thereafter, as described in sub-paragraph (2) of this condition:
  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 (b) and subject to review and approval by the Council.

2. The certificate holder shall adjust the amount of the bond or letter of credit using the following calculation:
    - 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.
    - ii. Round the result total to the nearest \$1,000 to determine the financial assurance amount.
  3. The certificate holder shall use an issuer of the bond or letter of credit approved by the Council.
  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.
- [Final Order on ASC, Retirement and Financial Assurance Condition 5; AMD2; AMD4]

#### *Ability of the Certificate Holder to Obtain a Bond or Letter of Credit*

OAR 345-022-0050(2) requires the Council to find that the certificate holder has a reasonable likelihood of obtaining a bond or letter of credit in a *form* and amount necessary to restore the facility site, with proposed changes, to a useful non-hazardous condition [Emphasis added].

A bond or letter of credit provides a site restoration remedy to protect the state of Oregon and its citizens if the certificate holder fails to perform its obligation to restore the site. The bond or letter of credit must remain in force until the certificate holder has fully restored the site. OAR 345-025-0010(8) establishes a mandatory condition, imposed under Retirement and Financial Assurance Condition 4 (PRE-RF-01), which ensures compliance with this requirement.

As described above, the amount necessary to restore the site of proposed RFA4 facility components to a useful, nonhazardous condition would be approximately \$9.7 million (Q4 2018 dollars), adjusted annually as required per existing Retirement and Financial Assurance Condition 5 (PRE-RF-02).

To demonstrate its ability to receive an adequate bond or letter of credit, the certificate holder provides an August 23, 2018 letter from Scotiabank stating that the bank would be willing to issue a letter of credit up to \$60 million.<sup>49</sup> Based on the October 2018 bank letter, the Council

---

<sup>49</sup> WRWAMD4 RFA4 Exhibit M Attachment M-1. 2019-07-01.

1 considers that the certificate holder continues to demonstrate a reasonable likelihood of  
2 obtaining a bond or letter of credit in the amount necessary for site restoration. Additionally, as  
3 described above and in accordance with Retirement and Financial Assurance Condition 5 (PRE-  
4 RF-02), construction of RFA4 facility components cannot commence until the Department  
5 receives a satisfactory bond or letter of credit.

6  
7 Subject to compliance with existing conditions, the Council finds that the site of the facility,  
8 with proposed changes, can be restored adequately to a useful, non-hazardous condition  
9 following permanent cessation of construction or operation. Additionally, the Council finds that  
10 the certificate holder has a reasonable likelihood of obtaining a bond or letter of credit in a  
11 form and amount satisfactory to the Council to restore the site to a useful, non-hazardous  
12 condition.

### 13 14 **Conclusions of Law**

15  
16 Based on the foregoing findings of fact, and subject to compliance with the Retirement and  
17 Financial Assurance conditions, the Council finds that the facility, with proposed changes, would  
18 continue to comply with the Council's Retirement and Financial Assurance standard.

### 19 20 **III.H. Fish and Wildlife Habitat: OAR 345-022-0060**

21  
22 *To issue a site certificate, the Council must find that the design, construction and operation*  
23 *of the facility, taking into account mitigation, are consistent with:*

24  
25 *(1) The general fish and wildlife habitat mitigation goals and standards of OAR 635-415-*  
26 *0025(1) through (6) in effect as of February 24, 2017\*\*\**

### 27 28 **Findings of Fact**

29  
30 The EFSC Fish and Wildlife Habitat standard requires the Council to find that the design,  
31 construction and operation of a facility is consistent with the Oregon Department of Fish and  
32 Wildlife's (ODFW) habitat mitigation goals and standards, as set forth in OAR 635-415-0025.  
33 This rule creates requirements to mitigate impacts to fish and wildlife habitat, based on the  
34 quantity and quality of the habitat as well as the nature, extent, and duration of the potential  
35 impacts to the habitat. The rule also establishes a habitat classification system based on value  
36 the habitat would provide to a species or group of species. There are six habitat categories;  
37 Category 1 being the most valuable and Category 6 the least valuable.

38  
39 The analysis area for potential fish and wildlife habitat impacts, as defined in the project order,  
40 is the area within the site boundary and extending ½-mile from all ground-disturbing activities.  
41 For this amendment request, because proposed changes include additional site boundary area,  
42 the analysis area is the area within the amended site boundary and extending ½-mile from all  
43 ground disturbing activities. The certificate holder conservatively assumed that the outer  
44 bounds of the amended site boundary represent the location of potential ground-disturbing

activities and therefore applied the analysis area as the area within and extending ½-mile from the amended site boundary.

#### *ODFW Consultation*

Council rules at OAR Chapter 345 Division 21 require the certificate holder to consult with ODFW to inform the analysis included in the amendment request and demonstrate compliance with the Council's Fish and Wildlife Habitat standard. Specifically, the consultation shall identify the appropriate field study and literature review necessary to accurately identify State Sensitive species potentially present in the analysis area and discuss any ODFW-identified site-specific issues of concern. For this amendment request, the certificate holder consulted with ODFW and the Department via conference-call on November 13, 2018. During the conference call, ODFW concurred with the certificate holder's Special Status species survey approach focusing on ODFW-listed State Sensitive species within the Columbia Plateau Ecoregion. ODFW did not express site specific concerns and described that the approach followed to inform the ASC remained adequate for evaluating potential habitat and specific impacts within the amended site boundary area. Additionally, ODFW recommended that the certificate holder address weed sources along the solar array fence lines and recommended that the revegetation plan include noxious weed control of these areas. ODFW also suggested that the certificate holder consider post-construction fatality monitoring within the proposed solar array area.

#### *Literature Review, Surveys and Survey Methods*

The certificate holder conducted a 2018 literature review of the following sources to identify Special Status species with the potential to occur within the analysis area:<sup>50</sup>

- ODFW 2013 GIS Dataset for Winter Range in Eastern Oregon
- ODFW 2016 Oregon Conservation Strategy
- ODFW 2016 Sensitive Species List
- ODFW 2018 State Listed Threatened, Endangered and Candidate Fish and Wildlife Species
- Oregon Biodiversity Information Center 2016 Rare, Threatened and Endangered Species of Oregon
- United States Fish and Wildlife Service (USFWS) 2008 Birds of Conservation Concern
- 2015 Wheatridge Wind Energy Facility Application for Site Certificate

The certificate holder also reviewed aerial photographs of the analysis area, National Wetlands Inventory (NWI) data, and the National Hydrography Dataset (NHD) to identify potential habitat within the analysis area.

---

<sup>50</sup> WRWAMD4Doc14-17 RFA4 Complete RFA4 Exhibit P. Fish and Wildlife Final 2019-07-01. RFA4 Exhibit P describes that Special Status species included federal and state endangered, threatened, proposed, and candidate species; species of concern; birds of conservation concern; sensitive and sensitive-critical species; and Oregon Conservation Strategy species.

Following completion of the literature review, the certificate holder conducted 2018 and 2019 field surveys for Special Status wildlife and plant species, habitat, and Oregon Department of Agriculture A, B, and T-listed noxious weeds species. Special Status wildlife, habitat and weed surveys were conducted concurrently, generally following the methodology developed in the *Status and Habitat Use of the Washington Ground Squirrels (WAGS) on State of Oregon Lands, South Boeing, Oregon*. Using this protocol, linear transect surveys were conducted on a grid by walking parallel transects roughly 60 meters apart which encompassed approximately 2,320 acres within the amended site boundary area of Wheatridge West where proposed RFA4 facility components would be located. Special status plant species field surveys were conducted by a botanist using the Intuitive Controlled survey method.

The Council's Fish and Wildlife Habitat standard protects state-listed species and its habitat; the standard does not specifically address federally-listed threatened and endangered (T&E) species. There is not a Council standard authorizing Council to impose or enforce regulations related to federally listed T&E species listed under 16 USC Section 1533. ODFW could make recommendations regarding habitat categorization under its Fish and Wildlife Habitat Mitigation Policy based on information about federally-listed T&E species use of a proposed facility site, which would then be implemented through the Council's standard. Nonetheless, federal wildlife laws must be adhered to by the certificate holder independent of the EFSC site certificate process.

#### *Habitat Types and Categories in the Analysis Area*

Based on habitat types and categories delineated during the ASC and surveys conducted in 2018/2019, identified habitat category, type and subtypes within the analysis area include:

- Category 1
  - Washington Ground Squirrel (WGS) Occupied: areas with suitable habitat that are within a 785-foot buffer of active WGS burrow (Grassland-Exotic Annual, Grassland-Native Perennial, Shrub-steppe-Rabbitbrush/Snakeweed)
- Category 2
  - WGS Potential Seasonal Home Range Shift and Dispersal Areas: 1500-meter buffer from active WGS burrow (Developed-Revegetated or Other Planted)

Grassland, Grassland-Exotic Annual, Grassland-Native Perennial, Shrub-steppe-Basin Big Sagebrush)

- Category 3

- Developed-Revegetated or Other Planted Grassland
- Grassland-Exotic Annual
- Grassland-Native Perennial
- Riparian-Trees
- Shrub-steppe-Basin Big Sagebrush

- Category 4

- Developed-Revegetated or Other Planted Grassland
- Grassland-Exotic Annual
- Grassland-Native Perennial
- Shrub-steppe-Basin Big Sagebrush

- Category 6

- Developed-Dryland Wheat
- Developed-Irrigated Agriculture
- Developed-Other

### *Potential Impacts to Fish and Wildlife Habitat*

The facility, with proposed changes, would cause temporary, temporal and permanent habitat impacts to Category 2 (WGS Potential Seasonal Home Range Shift); Category 3 (Developed-Revegetated or Other Planted Grassland, Grassland-Native Perennial, Shrub-steppe-Basin Big Sagebrush, Shrub-steppe-Rabbitbrush/Snakeweed); Category 4 (Grassland-Exotic Annual, Grassland-Native Perennial, Shrub-steppe-Rabbitbrush/Snakeweed); and Category 6 (developed dryland wheat, irrigated agriculture and other areas).<sup>51</sup> Impacts to Category 6 habitat do not require compensatory mitigation under the Council's Fish and Wildlife Habitat standard.

As presented in Table 5, *Estimated Temporary and Permanent Habitat Impacts, by Category, for Facility with Proposed Changes*, proposed RFA4 facility components would temporarily disturb approximately 1.7, 0.7 and 0.3 acres of Category 2, 3 and 4 habitats, respectively, resulting in temporary habitat impacts.<sup>52</sup> Proposed RFA4 facility components would permanently disturb approximately 4.3 and 76 acres of Category 2 and 4 habitats, respectively.

---

<sup>51</sup> Temporal loss refers to loss of habitat function and values from the time an impact occurs to the time when the restored habitat provides a pre-impact level of habitat function. Habitat subtypes with a shrub-steppe component are reasonably expected to require a longer restoration timeframe (5+ years) and therefore would be expected to result in temporal loss requiring compensatory mitigation beyond the certificate holder's revegetation obligation.

<sup>52</sup> As presented in RFA4 Exhibit P Table P-5, temporary impacts from proposed RFA4 facility impacts would only occur on grassland habitat, which is expected to recover in 1 to 3 years and is therefore not anticipated to result in a temporal loss.

**Table 5: Estimated Temporary and Permanent Habitat Impacts, by Category, for Facility, with Proposed Changes**

Habitat Category	Temporary Impacts <sup>1</sup>	Permanent Impact <sup>2</sup>	Calculated Mitigation Area (Temporal and Permanent Impacts) <sup>1,2</sup>
	Acres		
<b>Facility, as Approved</b>			
Category 2	259.0	31.2	>321
Category 3	134.7	17.4	84.9
Category 4	79.7	3.7	3.7
Category 6	931.6	118.9	0
Total Area =	1,197.5	171.2	409.6
<b>Proposed RFA4 Facility Components</b>			
Category 2	1.7	4.3	10.3
Category 3	0.7	0.0	0
Category 4	0.3	76.0	76.0
Category 6	6.0	812.7	0
Total Area =	8.7	893.1	>86.3
<b>Estimated Size of Habitat Mitigation Area Summary</b>			
Size of Habitat Mitigation Area for Facility, with Proposed Changes =			>495.9
Notes:			
In all cases impacts in a given area would only be mitigated once.			
1. Temporal and temporary impact mitigation is based on a >1:1 ratio for Category 2 for habitat with a shrub-steppe component; the mitigation ratio for Category 2 habitat without a shrub-steppe component may be 1:1.			

- 1
- 2 The mitigation goal for Category 2 habitat is no net loss of either habitat quantity or quality and
- 3 provision of a net benefit of habitat quantity or quality. To achieve this goal, impacts must be
- 4 avoided, or unavoidable impacts must be mitigated through “reliable in-kind, in-proximity”
- 5 habitat mitigation to achieve no net loss; and a net benefit of habitat quantity or quality must
- 6 be provided. The mitigation goal for Category 3 habitat is no net loss of either habitat quantity
- 7 or quality. The goal is achieved by avoidance of impacts or by mitigation of unavoidable impacts
- 8 through “reliable in-kind, in-proximity” habitat mitigation. The mitigation goal for Category 4
- 9 habitat, similar to the mitigation goal for Category 3 habitat impacts, is no net loss of either
- 10 habitat quantity or quality. The Category 4 mitigation goal differs from the Category 3
- 11 mitigation goal in that achievement may be reached through avoidance of impacts or by



mitigation of unavoidable impacts through “reliable in-kind or out-of kind,” and “in- or off-of proximity” habitat mitigation.<sup>53</sup>

#### *Proposed Habitat Mitigation for Temporary Habitat Impacts*

The certificate holder proposes to mitigate temporary impacts from proposed RFA4 facility components to habitat categories 2, 3 and 4 through revegetation in accordance with the draft amended Revegetation Plan provided in Attachment E of this order. The draft amended plan includes substantive changes from the previously approved version of the plan. Substantive changes recommended by the Department, based on current coordination with ODFW, include the following additional pre-construction requirements: pre-construction agency consultation to discuss pre-disturbance conditions and adequacy of revegetation measures; identify monitoring and reference sites within areas of distinct habitat; and, conduct a pre-disturbance vegetation and weed survey of the selected monitoring and reference sites. The draft amended plan also includes revised success criteria determined to be better suited in the evaluation of successful revegetation of temporarily disturbed habitat. Based on the draft amended Revegetation Plan provided as Attachment E of this order, the Council finds that the certificate holder would meet the habitat mitigation goals for temporary habitat impacts.

#### *Proposed Habitat Mitigation for Permanent Habitat Impacts*

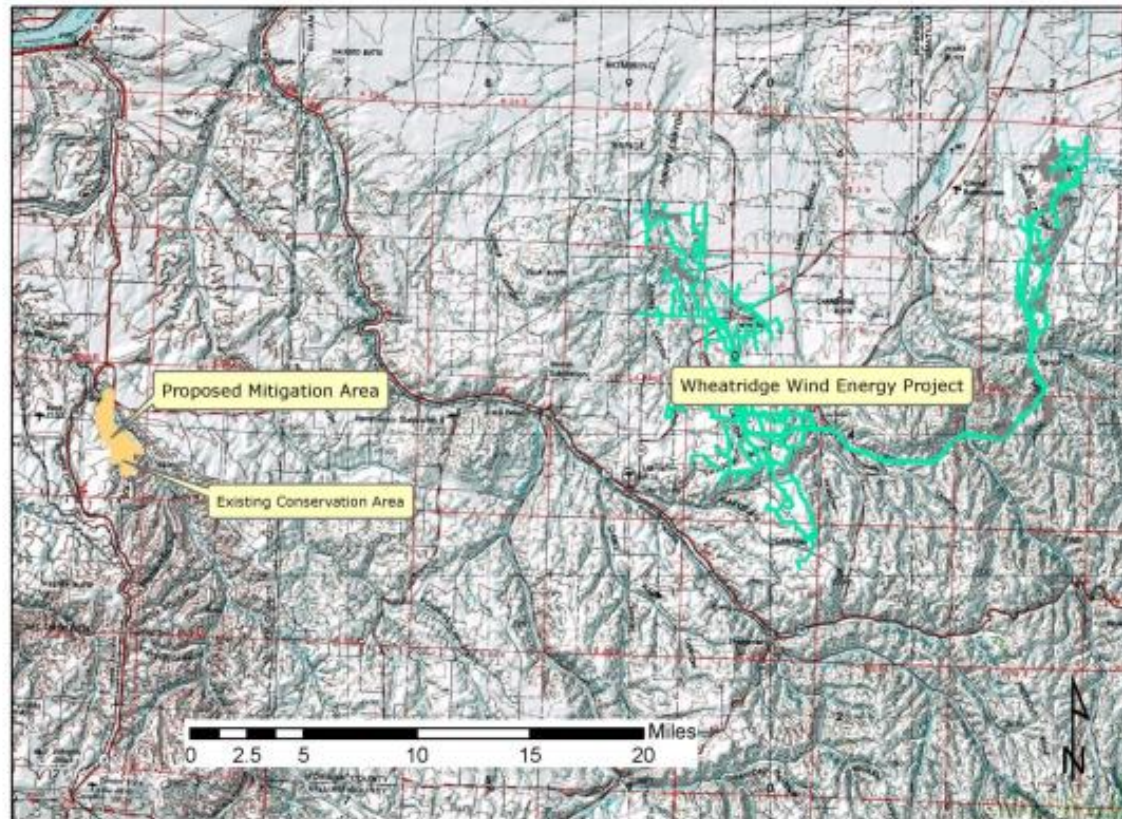
The certificate holder proposes to mitigate permanent habitat impacts from proposed RFA4 facility components in the form of a permanent conservation easement on a habitat mitigation area (HMA) in-proximity to the proposed amended site boundary, which contains similar habitat quality and quantity as the habitat to be impacted. As described above, the Council’s Fish and Wildlife Habitat standard implements ODFW’s Fish and Wildlife Habitat Mitigation Policy – which establishes qualitative mitigation goals per habitat category; neither the standard nor the policy establish a prescriptive methodology for satisfying the mitigation goals. Therefore, the certificate holder’s proposed methodology for achieving the Category 2 habitat mitigation goal is to include in its HMA 2 acres for every 1 acre of Category 2 habitat permanently impacted (a 2:1 ratio to provide no net loss and a net benefit of habitat quantity). The certificate holder proposes to mitigate impacts to Categories 3 and 4 habitat by including 1 acre for every 1 acre permanently impacted within its HMA (a 1:1 ratio to provide no net loss). Based on this proposed methodology, the HMA would include more than approximately 496 acres for mitigation of 393 acres of temporary and permanent habitat impacts, respectively, to Category 2 habitat, and permanent impacts to Category 3 and 4 habitats from the facility, with proposed changes. The certificate holder has identified more than 550 acres of suitable in-kind and in-proximity habitat for use as its HMA, as presented in Figure 3 *Proposed Habitat Mitigation Area Location*.<sup>54</sup>

---

<sup>53</sup> OAR 635-415-0025(5)(b)

<sup>54</sup> WRWAMD4Doc14-17 RFA4 Complete RFA4 Exhibit P. Fish and Wildlife Final, Section 5.1. 2019-07-01.

1 **Figure 3: Proposed Habitat Mitigation Area Location**



Overview Map: Habitat Mitigation Area for the Wheatridge Wind Energy Project.

1 In RFA4 Exhibit P, the certificate holder asserts that it has obtained an agreement with a  
2 landowner for the ability to contractually secure a long-term easement for a portion of the  
3 available 550 acres at the site. The HMA, as identified in the ASC, includes Native Perennial  
4 Grassland, Revegetated Grassland, Basin Big Sagebrush Shrub-steppe, Rabbitbrush/Buckwheat  
5 Shrub-steppe, and Exotic Annual Grassland habitats of varying quality. Basalt escarpments also  
6 occur in the HMA. As explained in RFA4 Exhibit P, the certificate holder's biological consultant,  
7 Northwest Wildlife Consultants, confirmed with ODFW that the parcels identified have  
8 adequate potential for mitigating the habitat loss expected to occur and for providing benefit  
9 for the wildlife species that use the habitats impacted by habitat loss associated with the  
10 facility, with proposed changes, including big game. All of the habitat proposed for use as  
11 mitigation lies within designated deer winter range.

12  
13 Implementation, management and monitoring of the HMA would be required through a  
14 previously imposed Fish and Wildlife Condition 10 (PRE-FW-04), which requires that the  
15 certificate holder implement a final Habitat Mitigation Plan (HMP) as approved by the  
16 Department in consultation with ODFW. As presented in Attachment A of this order, the  
17 Council amends Fish and Wildlife Condition 10 (PRE-FW-04) to ensure that an updated habitat  
18 assessment of the HMA be conducted prior to construction to demonstrate that the HMA  
19 contains sufficient acreage per impacted habitat category to meet the mitigation goals based  
20 on final facility habitat impacts.

21  
22 In addition to mitigation through the HMA, as specified in the draft amended HMP (see  
23 Attachment D of this order), the certificate holder proposes to implement and monitor specific  
24 enhancement actions within the HMA. Habitat enhancement actions are proposed to further  
25 satisfy the Category 2 "net-benefit" mitigation goal including modification of grazing practices;  
26 weed monitoring and control; seeding and planting sagebrush and bunch grasses;  
27 implementation of a fire control plan; wildfire suppression; and wildlife projects (e.g.  
28 installation of burrowing owl artificial burrows and artificial nest structures).

29  
30 Moreover, Council previously imposed the following conditions: Fish and Wildlife Habitat  
31 Condition 1 (PRE-FW-01) and Fish and Wildlife Habitat Condition 11 (PRE-FW-05), as  
32 summarized below:

- 33  
34 • **Fish and Wildlife Habitat Condition 1 (PRE-FW-01)** requires that, prior to construction,  
35 the certificate holder conduct a field-based habitat survey to confirm the habitat  
36 categories of all areas to be affected by facility components to be used to inform the  
37 necessary habitat type and quantity within the HMA.
  - 38 • **Fish and Wildlife Habitat Condition 11 (PRE-FW-05)** requires that, during operation, the  
39 certificate holder restore and revegetate disturbed habitat areas as outlined in the final  
40 Revegetation Plan, to be reviewed and approved by the Department, in consultation  
41 with ODFW.
- 42

1 *Potential Impacts to State Sensitive Wildlife Species*

2  
3 As described above, the certificate holder conducted a literature review to identify potential  
4 State Sensitive species with the potential to occur within the analysis area. Based on this  
5 desktop review, the certificate holder identified suitable habitat within the analysis area for:  
6 State-sensitive species (including 2 reptiles, 12 birds and 5 bat species. Of these State Sensitive  
7 species, 9 birds and 2 bat species were documented during previous surveys conducted for the  
8 facility. During 2018 surveys, six Special Status species were observed including WAGS,  
9 ferruginous hawk, Swainson's hawk, loggerhead shrike, long-billed curlew, and grasshopper  
10 sparrow. Potential impacts and mitigation to WAGS and WAGS habitat is discussed in Section  
11 III.I. *Threatened and Endangered Species* of this order.

12  
13 Potential impacts to State Sensitive species during construction and operation of the facility,  
14 with proposed changes, include sensory disturbance (i.e., noise, vibration, and visual) from the  
15 presence of personnel, vehicles, and equipment; as well as permanent impacts from habitat  
16 loss/modification; collision with equipment and facilities; increased predation risk from  
17 transmission lines used for perching, and transmission line electrocution and collision. As  
18 explained in RFA4 Exhibit P, current scientific studies regarding avian mortality at utility scale  
19 solar sites is inconclusive; however, the Council previously imposed Fish and Wildlife Habitat  
20 Condition 4 (PRE-FW-02) requiring the certificate holder to implement a Wildlife Monitoring  
21 and Mitigation Plan (WMMP). The WMMP, currently in draft form and included as Attachment  
22 G to this order, requires the certificate holder to conduct short-term and long-term surveys to  
23 evaluate wildlife impacts. Specifically, the WMMP requires that the certificate holder conduct  
24 raptor nest surveys on 5-year intervals for the life of the facility. The WMMP also requires that  
25 the certificate holder conduct a short-term post-construction bird and bat fatality monitoring  
26 study and an avian use and behavior study, both of which will apply to the facility, with  
27 proposed changes, and would provide important data that can be used in adaptive  
28 management.

29  
30 Council previously imposed Fish and Wildlife Habitat Condition 5 (CON-FW-02) requiring that,  
31 during construction, the certificate holder limit construction activities within ¼-mile of raptor  
32 nests for specifically identified State Sensitive species, during sensitive nesting and breeding  
33 seasons. The condition, as presented in the site certificate, does not identify a process for  
34 evaluating potentially active nest sites prior to and during construction. Therefore, the Council  
35 amends the condition to clarify that active nest sites be identified prior to construction; and,  
36 that the nest sites be monitored during construction to confirm changes in nest status during  
37 the sensitive season. The amended condition confirms that both pre-construction nest surveys  
38 and nest monitoring be based on an ODFW-approved protocol as presented below.

39  
40 Further, the certificate holder requests that the condition be amended to allow an opportunity  
41 to request an exception to the limitation of construction activities within the ¼-mile buffer if a  
42 demonstration of avoidance, minimization and mitigation can be demonstrated and approved  
43 by the Department in consultation with ODFW. The Council generally agrees that, if due to  
44 unforeseen circumstances, a nest site becomes active during construction activities, a process

should be available to evaluate a potential mitigation strategy that would minimize impacts to the affected species and appropriately mitigate impacts. Therefore, the Council amends the condition as follows:<sup>55</sup>

**Amended Fish and Wildlife Habitat Condition 5 (CON-FW-02):**

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.

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.

<u>Status Sensitive Nesting Species</u>	Buffer Size (Radius Around Nest Site):	<u>Sensitive Nesting and Breeding Season</u> <u>Avoidance Buffers in Effect from:</u>
Western burrowing owl	0.25 mile	April 1 to August 15
Ferruginous hawk	0.25 mile	March 15 to August 15
Swainsons hawk	0.25 mile	April 1 to August 15

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.

[Final Order on ASC, Fish and Wildlife Habitat Condition 5; AMD3; AMD4]

<sup>55</sup> WRWAMD4. DPO Public Comment Gilbert. 2019-09-09. On the record of the draft proposed order, Ms. Gilbert asserts that Fish and Wildlife Habitat Condition 5 (buffer/seasonal restrictions) needs to apply to federally listed T&E bird species (e.g. buto hawks, peregrine falcon, bald eagle, burrowing owl, Golden eagles and any other federal T&E raptor species), which should be considered Category 1 habitat where an exception to the seasonal/buffer restriction (as presented in the recommended amended condition) would result in indirect impacts which are not allowable under ODFW's Fish and Wildlife Habitat Mitigation Policy (OAR 635-415-0025) and would be illegal under the Endangered Species Act. For the reasons further clarified in the proposed order, the Council finds that the standard does not authorize Council to impose requirement for federally listed T&E species.

Council previously imposed Condition CON-FW-01 restricting construction activities within habitat designated mule deer winter range from December 1 to March 31. As presented in RFA4, the certificate holder seeks Council approval to amend Condition CON-FW-01 to provide the opportunity for alternative measures to avoid, minimize, or mitigate impacts to mule deer winter range during winter as follows:

**Recommended Amended Fish and Wildlife Habitat Condition 3 (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.

[Final Order on ASC, Fish and Wildlife Habitat Condition 3; AMD4]

The Council, in consultation with ODFW, acknowledge that there may be exceptions to the seasonal restriction such as implementation of best management practices that would effectively minimize potential impacts while allowing construction activities to continue. As noted in the above recommended amended condition, the request for an exception would need to include justification and any proposed actions to avoid, minimize, or mitigate impacts to big game habitat within the area. The Department would be obligated to consult with ODFW on the request, prior to approving or denying such a request. For these reasons, the Council amends Fish and Wildlife Habitat Condition 3 (CON-FW-01) as requested by the certificate holder.

Council previously imposed the following conditions to reduce potential wildlife impacts:

- **Fish and Wildlife Condition 8 (PRE-FW-03)** requires that, prior to construction, the certificate holder install flagging on all designated environmentally sensitive areas in order to restrict work and minimize potential disturbance-related impacts
- **Fish and Wildlife Condition 2 (GEN-FW-01)** requires that, during construction and operation, the certificate holder adhere to a 20 mile per hour speed limit during facility related transport on new and improved private access roads
- **Fish and Wildlife Condition 6 (GEN-FW-02)** requires that design and construction of collector and transmission lines be in accordance with the most current Avian Power Line Interaction Committee design standards.
- **Fish and Wildlife Condition 3 (CON-FW-01)** requires that, during construction, the certificate holder restrict construction activities within designated mule deer winter range from December 1 to March 31

- **Fish and Wildlife Condition 5 (CON-FW-02)** requires that, during construction, the certificate holder limit construction activities within ¼-mile of specifically identified State Sensitive raptors during sensitive nesting and breeding seasons
- **Fish and Wildlife Condition 7 (CON-FW-03)** requires that, during construction, the certificate holder provide environmental training to all onsite personnel
- **Fish and Wildlife Condition 9 (CON-FW-04)** requires that, during construction, the certificate holder employ at a minimum one environmental inspector to be onsite daily to verify site certificate compliance and protection of sensitive resources

#### *Potential Impacts to State Sensitive Plant Species*

As described above, the certificate holder evaluated potential impacts to State Sensitive plant species through a 2018 literature review and Special Status plant field survey. The literature review identified 1 Special Status plant species – Laurence’s milkvetch – a state-listed threatened species - which was not observed during the 2018 field survey. However, Laurence’s milkvetch was previously identified within the site boundary during 2011 surveys conducted to inform the ASC. As a result of the 2011 plant surveys, Council imposed Condition PRE-TW-03 requiring pre-construction surveys for Laurence’s milkvetch and, if identified, requires impact avoidance, as further described in Section III.I. *Threatened and Endangered Species* of this order.

Based on the above analysis, the Council finds that the design, construction, and operation of the facility, with proposed changes, taking into account mitigation, would be consistent with the fish and wildlife habitat mitigation goals and standards of OAR 345-415-0025.

#### **Conclusions of Law**

Based on the foregoing findings of fact and conclusions, and subject to compliance with existing and amended site certificate conditions, the Council finds that facility, with proposed changes, would continue to comply with the Council’s Fish and Wildlife Habitat standard.

#### **III.I. Threatened and Endangered Species: OAR 345-022-0070**

*To issue a site certificate, the Council, after consultation with appropriate state agencies, must find that:*

*(1) For plant species that the Oregon Department of Agriculture has listed as threatened or endangered under ORS 564.105(2), the design, construction and operation of the proposed facility, taking into account mitigation:*

*(a) Are consistent with the protection and conservation program, if any, that the Oregon Department of Agriculture has adopted under ORS 564.105(3); or*

*(b) If the Oregon Department of Agriculture has not adopted a protection and conservation program, are not likely to cause a significant reduction in the likelihood of survival or recovery of the species; and*

*(2) For wildlife species that the Oregon Fish and Wildlife Commission has listed as threatened or endangered under ORS 496.172(2), the design, construction and operation of the proposed facility, taking into account mitigation, are not likely to cause a significant reduction in the likelihood of survival or recovery of the species.*

## **Findings of Fact**

The Threatened and Endangered Species standard requires the Council to find that the design, construction, and operation of the facility are not likely to cause a significant reduction in the likelihood of survival or recovery of a fish, wildlife, or plant species listed as threatened or endangered by Oregon Department of Fish and Wildlife (ODFW) or Oregon Department of Agriculture (ODA). For threatened and endangered plant species, the Council must also find that the facility is consistent with an adopted protection and conservation program from ODA. Threatened and endangered species are those listed under ORS 564.105(2) for plant species and ORS 496.172(2) for fish and wildlife species. For the purposes of this standard, threatened and endangered species are those identified as such by either the Oregon Department of Agriculture or the Oregon Fish and Wildlife Commission.<sup>56</sup>

The analysis area for threatened or endangered plant and wildlife species, as defined in the Project Order, is the area within and extending 5-miles from the amended site boundary.

### *Methodology – Literature Review*

In order to identify threatened or endangered species that might occur within the analysis area, the certificate holder consulted with the Oregon Department of Fish and Wildlife (ODFW), United States Fish and Wildlife Service (USFW) and conducted 2018/2019 literature and field surveys. The certificate holder's 2018 literature review evaluated the following sources:

- Burke Museum of Natural History and Culture's 2003 Herbarium and Image Collection; University of Washington. Seattle, WA
- Oregon Department of Fish and Wildlife's (ODFW) 2016 Oregon Conservation Strategy
- Oregon Department Agriculture's 2018 Oregon Listed Plants by County
- ODFW's 2016 Sensitive Species List
- ODFW's 2018 Threatened, endangered and candidate fish and wildlife species list
- Oregon Biodiversity Information Center 2016 Rare, Threatened and Endangered Species of Oregon

---

<sup>56</sup> Although the Council's standard does not address federally-listed threatened or endangered species, certificate holders must comply with all applicable federal laws, including laws protecting those species, independent of the site certificate.



- Oregon Flora Project – 2017 - Oregon Plant Atlas and digitized specimen labels and submitted observations
- Oregon Flora Project – 2017 - Rare Plant Guide; Oregon State University
- U.S. Fish and Wildlife Service's (USFWS) 2008 Birds of Conservation Concern 2008
- USFWS's 2016 Endangered and Threatened Wildlife and Plants; 12-Month Findings on Petitions To List Nine Species as Endangered or Threatened Species.
- USFWS's 2018 Critical Habitat for Threatened & Endangered Species
- USFWS's 2018 Federally Listed, Proposed, Candidate, Delisted Species and Species of Concern Under the Jurisdiction of the Fish and Wildlife Service which May Occur in Oregon
- USFWS's 2018 Oregon's Endangered Species – Plants. Oregon Fish and Wildlife Office.
- Washington Department of Natural Resources' 2017 Rare Plant Online Field Guide
- Wheatridge Wind Energy Facility 2015 Application for Site Certificate

Based on the 2018 literature review, five listed threatened or endangered species were identified with the potential for occurrence within 5 miles of the proposed amended site boundary including one plant, two mammal, and two fish. These species are Laurent's milkvetch (*Astragalus collinus* var. *laurentii*; state threatened species, federal species of concern), Washington ground squirrel (*Urocitellus washingtoni*; state endangered species; federal species of concern), grey wolf (*Canis lupus*; state delisted, federal endangered species), bull trout (*Salvelinus confluentus*; federal threatened species), and steelhead (*Oncorhynchus mykiss*; Middle Columbia River summer run; federal threatened species). Three of these species are federally but not state listed, so they are not further addressed in RFA4 or this order (gray wolf, bull trout, and steelhead).

The amendment request and this order further evaluate the potential for occurrence and potential impacts to Laurent's milkvetch and Washington ground squirrel (WAGS). Laurent's milkvetch is a narrowly distributed plant species endemic in western Umatilla and Morrow Counties found on deep loess soils in Palouse grasslands. WAGS are a small ground squirrel associated with shrub-steppe habitats of the Columbia Basin ecoregion.

#### *Methodology – Field Surveys*

The certificate holder conducted 2018/2019 surveys for Laurent's milkvetch and WAGS within suitable habitat identified within the amended site boundary. Surveys for WAGS were conducted in 2018 (May 1-4 and May 30-31) and in 2019 (April 10-12 and May 3-5). As explained in RFA4 Exhibit P Attachment P-1, WAGS surveys generally followed methodology developed in the *Status and Habitat Use of the WAGS on State of Oregon Lands* which includes 60-meter grid transect spacing within 1,000 feet of potential ground disturbance (i.e., permanent and temporary impacts associated with the solar microsites corridor) of suitable WAGS habitat.

1 The certificate holder conducted rare plant surveys on May 2-3, 2018 within the proposed  
2 amended site boundary designed to verify the presence or absence of Laurent's milkvetch and  
3 the four-candidate species identified as having a possibility of occurrence. Rare plant field  
4 surveys were conducted by a botanist using the Intuitive Controlled survey method, which  
5 incorporates survey lines that traverse the survey area and target the full array of major  
6 vegetation types, aspects, topographical features, habitats, and substrate types.

#### 7 8 *Field Survey Results* 9

10 Results of 2018/2019 WAGS surveys identified one active WAGS colony within the amended  
11 site boundary. The initial observation was an audio detection at the west side of the colony, in  
12 Native Perennial Grassland habitat. Nineteen burrows were identified, with scat occurring at  
13 three burrows. Burrows were scattered across the area, with no more than five in a single  
14 location. No other areas of WAGS activity were noted in the amended site boundary.

15  
16 Results of the 2018 rare plant survey conducted identified no populations of Laurent's  
17 milkvetch or the four-candidate species. As described in RFA4 Exhibit Q, the survey areas  
18 contained an abundance of non-native species, disturbance from agricultural activities, and  
19 limited habitat likely to support the target species.

#### 20 21 *Potential Impacts to Identified Threatened and Endangered Species* 22

23 As described above, the proposed amended site boundary contains suitable WAGS habitat, with  
24 an active colony identified within the proposed solar micro-siting corridor. Potential impacts to  
25 WAGS from proposed RFA4 facility components could include direct loss of habitat including  
26 the active colony, if not avoided, and could also include direct mortality from vehicular use  
27 during construction and operation. Potential indirect adverse effects include the loss of  
28 potential future suitable habitat (i.e. suitable habitat which is currently not WAGS occupied).  
29 Council previously imposed Threatened and Endangered Species Condition 1 (PRE-TE-01)  
30 requiring that, prior to construction, the certificate holder conduct a protocol-level survey in all  
31 areas of suitable habitat within 1,000 feet of any ground disturbing activity for WAGS to ensure  
32 avoidance of any temporary or permanent impacts to Washington ground squirrel habitat.<sup>57</sup>  
33 In RFA4, the certificate holder affirms that proposed RFA4 facility component location and  
34 micro-siting have been designed to avoid the identified active WAGS colony, including a 785-  
35 foot buffer around the colony considered to represent Category 1 WAGS habitat where  
36 disturbance from facility components is precluded. If, during pre-construction protocol-level  
37 WAGS surveys, additional active WAGS colonies are identified, the certificate holder would be  
38 required to site facility components within the amended site boundary area to avoid WAGS  
39 habitat (i.e. area extending 785-feet from active colony) or seek Council approval of a site

---

<sup>57</sup> Threatened and Endangered Species Condition 2 (PRE-TE-02) incorrectly references Fish and Wildlife Habitat Condition 3 for the finalization and implementation of the Wildlife Monitoring and Mitigation Plan (WMMP). The condition should reference Fish and Wildlife Habitat Condition 4. The Council administratively amends Threatened and Endangered Species Condition 3 to reference Fish and Wildlife Habitat Condition 4.

certificate amendment if sufficient area is no longer available within the site boundary based on changes in WAGS colony locations between the time of RFA4 approval and pre-construction.

As described above, the proposed new site boundary area contains suitable Laurent's milkvetch habitat; however, there were no populations identified during 2018 surveys. While the species was not identified during 2018 surveys, populations were previously identified during the ASC phase elsewhere in the site boundary, and therefore Council previously imposed Threatened and Endangered Species Condition 3 (PRE-TE-03) requiring that the certificate holder conduct a pre-construction survey for Laurent's milkvetch and flag and avoid areas where the species is located. Because the existing condition requires impact avoidance if the species is identified during pre-construction surveys and because significance of any potential impacts has not been evaluated, the Council amends the condition to provide a process for evaluating the significance of potential impacts to determine appropriate level of avoidance and mitigation, if complete avoidance is not possible. In other words, the Council's Threatened and Endangered Species standard allows for the evaluation of impact significance to include mitigation. Because substantial Laurent's milkvetch species populations have not been previously identified within the analysis area, an evaluation of the significance of potential impacts has not been completed. However, considering the potential for the species to be identified in the site boundary during pre-construction surveys, and considering the Council's Threatened and Endangered Species standard, the Council amends Threatened and Endangered Species Condition 3 (PRE-TE-03) to outline a process for assessing potential impacts and mitigation, should the species be discovered during pre-construction surveys.

The Council amends the condition to clarify that the extent of the survey area extend 100, and not 1,000 feet, from temporary and permanent disturbance within suitable habitat. This survey adjustment is based on input from the Oregon Department of Agriculture, which was included in the certificate holder's pre-construction compliance submittal for the previously-approved wind and battery storage facility components. Amended condition language is as follows:<sup>58</sup>

**Amended Threatened and Endangered Species Condition 3 (PRE-TE-03):** To avoid potential impacts to Laurent's milkvetch, the certificate holder must:

- i. Conduct preconstruction plant surveys (survey area) in suitable habitat for Laurent's milkvetch within 100 ~~1,000~~ feet of temporary and permanent disturbance from ~~the 230 kV intraconnection transmission line; and, within 500 feet of temporary and permanent disturbance from all other~~ facility components. 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.
- ii. Ensure that any plant protection zone established under (i) above is included on construction plans showing the final design locations.
- iii. If herbicides are used to control weeds, the certificate holder shall follow the manufacturer's guidelines in establishing a buffer area around confirmed

---

<sup>58</sup> WRWOPS Compliance Submittal 01 2019-05-02.

populations of Laurent's milkvetch. Herbicides must not be used within the established buffers.

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:

- 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;
- A description of the individual(s) or population(s) identified within the survey area that would be avoided and impacted;
- An evaluation of facility impacts on the survival or recovery of the species, in accordance with the Threatened and Endangered Species standard;
- 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.
- 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.

[Final Order on ASC, Threatened and Endangered Species Condition 3; AMD3; AMD4]

Based upon compliance with previously imposed and amended conditions, the Council finds that the facility, with proposed changes, would not be likely to cause a significant reduction in the likelihood or survival of any species listed as threatened or endangered.

### **Conclusions of Law**

Based on the foregoing findings of fact and conclusions, and subject to compliance with existing and amended site certificate conditions, the Council finds that the facility, with proposed changes, would continue to comply with the Council's Threatened and Endangered Species standard.

### **III.J. Scenic Resources: OAR 345-022-0080**

*(1) Except for facilities described in section (2), to issue a site certificate, the Council must find that the design, construction and operation of the facility, taking into*

account mitigation, are not likely to result in significant adverse impact to scenic resources and values identified as significant or important in local land use plans, tribal land management plans and federal land management plans for any lands located within the analysis area described in the project order.

### **Findings of Fact**

OAR 345-022-0080 requires the Council to determine that the design, construction and operation of a proposed facility or facility, with proposed changes, are not likely to have a “significant adverse impact” to any significant or important scenic resources and values in the analysis area. In applying the standard set forth in OAR 345-022-0080(1), the Council assesses the visual impacts of facility structures on significant or important scenic resources described in “local land use plans, tribal land management plans and federal land management plans for any lands located within the analysis area described in the project order.” For purposes of this rule, “local land use plans” includes applicable state land use and management plans.

The Project Order defines the analysis area for the Scenic Resources standard as the area within and extending 10-miles from the site boundary.<sup>59</sup> RFA4 proposes to expand the site boundary; therefore, the analysis area includes the area within and extending 10-miles from the proposed amended site boundary.

The applicable land use management plans evaluated to confirm whether there are significant or important scenic resources within the analysis area are presented in Table 6: *Important Scenic Resources Inventory* below.

**Table 6: Important Scenic Resources Inventory**

<b>Jurisdiction</b>	<b>Plan</b>	<b>Scenic Resources Specified in Plan (Y/N)</b>	<b>Important or Significant Scenic Resources Identified in Analysis Area (Y/N)</b>
<b>Counties</b>			
Morrow County	Morrow County Comprehensive Plan and Zoning Ordinance, as updated through 2016	No	No
Umatilla County	Umatilla County Comprehensive Plan, as amended through 2017	Yes	No
<b>Cities</b>			
City of Lone	City of Lone Comprehensive Plan (1999)	No	No
City of Lexington	City of Lexington Comprehensive Plan (1979)	No	No

<sup>59</sup> WRWNOIDoc022 Project Order, p. 24, 2013-05-22.

**Table 6: Important Scenic Resources Inventory**

<b>Jurisdiction</b>	<b>Plan</b>	<b>Scenic Resources Specified in Plan (Y/N)</b>	<b>Important or Significant Scenic Resources Identified in Analysis Area (Y/N)</b>
City of Heppner	City of Heppner Comprehensive Plan (2004)	No	No
City of Hermiston	City of Hermiston Comprehensive Plan, as amended through 2014	No	No
City of Stanfield	City of Stanfield Comprehensive Plan (1983) and Development Code (2003)	No	No
City of Echo	City of Echo Comprehensive Plan (2005) and Zoning Administrative Regulations (2010)	No	No
<b>Tribal</b>			
None applicable	None	-	-
<b>Federal</b>			
BLM, Vale District, Baker Resource Area	Baker Resource Management Plan (BLM 1989)	Yes	No
NPS	Management and Use Plan Update, Oregon National Historic Trail and Mormon Pioneer National	No	No
DoD	Integrated Natural Resource Management Plan and Integrated Cultural Resource Management Plan for Boardman Bombing Range (Naval Weapons System Training Facility), 2012	No	No
USFS/ODOT	Blue Mountain Scenic Byway Interpretive Management Plan (1993)	Yes	No

- 1 As presented in the table above, based on the certificate holder's review of applicable land use  
2 plans, there are no significant or important scenic resources within the analysis area.  
3 Nonetheless, the certificate holder addresses potential visual impacts from proposed RFA4  
4 facility components, briefly described below, which is further evaluated in Section III.F. *Protected*  
5 *Areas* and III.L *Recreation* of this order  
6  
7 *Visual Features of the Proposed RFA4 Facility Components*  
8  
9 Proposed RFA4 facility components include solar panels, overhead 34.5 kV collector lines and  
10 skid-mounted inverters and transformers, with the solar panels representing the most

dominant visual element of the proposed components. Solar modules would be mounted on a tracking system that rotates the modules throughout the day as the sun's angle changes, with a maximum height of 16 feet at full tilt. The movement of the modules, combined with their antireflective coating, would minimize glare but would be expected to have the overall appearance of a dark line on the horizon. Inverter boxes associated with the proposed battery storage systems would be approximately 12 feet wide, 36 feet long, and 10 feet tall. Aboveground 34.5 kV collector line structures would be wooden or steel monopole, extending approximately 60 feet in height.

Council previously imposed Scenic Resources Condition 1 (GEN-SR-01) to minimize visual impacts from substation and O&M building lighting; and Scenic Resources Condition 2 (GEN-SR-02) to minimize visual impacts from facility component finish, vegetative clearing and facility signage. In RFA4, the certificate holder represents that it would implement the same measures for inverter boxes associated with the proposed solar and battery components.

### **Conclusion of Law**

Based on the foregoing recommended findings of fact and conclusions of law, the Council finds that proposed RFA4 facility components would comply with the Council's Scenic Resources standard.

### **III.K. Historic, Cultural, and Archaeological Resources: OAR 345-022-0090**

*(1) Except for facilities described in sections (2) and (3), to issue a site certificate, the Council must find that the construction and operation of the facility, taking into account mitigation, are not likely to result in significant adverse impacts to:*

*(a) Historic, cultural or archaeological resources that have been listed on, or would likely be listed on the National Register of Historic Places;*

*(b) For a facility on private land, archaeological objects, as defined in ORS 358.905(1)(a), or archaeological sites, as defined in ORS 358.905(1)(c); and*

*(c) For a facility on public land, archaeological sites, as defined in ORS 358.905(1)(c).*

*(2) The Council may issue a site certificate for a facility that would produce power from wind, solar or geothermal energy without making the findings described in section (1). However, the Council may apply the requirements of section (1) to impose conditions on a site certificate issued for such a facility.*

\*\*\*

### **Findings of Fact**

Subsection (1) of the Historic, Cultural and Archaeological Resources standard, OAR 345-022-0090, generally requires the Council to find that the facility is not likely to result in significant

1 adverse impacts to identified historic, cultural, or archaeological resources. Subsection (2) of  
2 OAR 345-022-0090 provides that the findings described in subsection (1) may be waived for  
3 wind and solar facilities. However, the Council may impose site certificate conditions based on  
4 the requirements of this standard.

5  
6 The analysis area for the evaluation of potential impacts to identified historic, cultural or  
7 archeological resources, as defined in the Project Order, is the area within the site boundary.  
8 RFA4 proposes to expand the site boundary; therefore, the analysis area extends to the area  
9 within the proposed amended site boundary.<sup>60</sup>

#### 10 11 *Description of Discovery Measures*

12  
13 The certificate holder conducted desktop and field surveys to evaluate known and unknown  
14 cultural, historic and archeological resources. The certificate holder also consulted with the  
15 Confederated Tribes of the Umatilla Indian Reservation (CTUIR) to support the evaluation of  
16 potential impacts to tribal resources. Specifically, the certificate holder conducted a 2019  
17 literature review using Oregon State Historic Preservation Office's (SHPO) Online Archeological  
18 Records Remote Access (OARRA) and Historic Sites Database to identify previously recorded  
19 resources within 1-mile of the proposed amended site boundary; the certificate holder also  
20 reviewed historic aerial photographs. In addition to the literature review, the certificate holder  
21 conducted field surveys in 2018 (April 21-29) and 2019 (May 1-2) encompassing 2,291 and 83  
22 acres, respectively, within the proposed amended site boundary area, excluding areas  
23 overlapping previously surveyed areas within the approved site boundary. The field surveys  
24 were "non-collection" pedestrian surveys, meaning that the field surveys did not include  
25 subsurface probing of archeological site boundaries or isolated find localities.<sup>61</sup>

26  
27 In addition, the certificate holder consulted with CTUIR on the extent of proposed RFA4 facility  
28 modifications and potential impacts to tribal resources. It is noted that the (previous) certificate  
29 holder consulted with CTUIR during the ASC process and contracted with CTUIR to complete the  
30 archeological field investigation and report submitted in 2014 for the ASC for the facility, as  
31 approved. While no known Historic Properties of Religious and Cultural Significance to the  
32 Indian Tribes (HPRCSITs) have been identified during previous or current CTUIR consultation for  
33 the facility, in its review of pRFA4, CTUIR expressed concerns of potential impacts from

---

<sup>60</sup> Also noted in the Project Order, the certificate holder must assess potential impacts beyond the analysis area if there are identified resources that could result in significant adverse impacts, direct or indirect, from the facility or a proposed change to a facility. The certificate holder has not identified potential resources outside of the analysis area for which this would apply; however, this information is provided to inform the reviewer of the certificate holder's obligation to evaluate potential impacts if resources are identified during the RFA4 review process.

<sup>61</sup> WRWAMD4. DPO Tribal Government Comment. CTWS. 2019-09-06. In comments on the draft proposed order, archeologist Christian Nauer commented that the proposed new site boundary area should be surveyed for cultural, archeological and historic resources, which as described above, was completed.



1 proposed RFA4 facility components that should be informed through a traditional use study  
2 completed by the certificate holder.<sup>62</sup>

3  
4 The Council notes that the Cultural, Historic and Archeological Resources standard does not  
5 require an evaluation of potential impacts to unknown resources. It is therefore noteworthy  
6 that, as confirmed on June 11, 2019 by CTUIR's Cultural Resources Protection Manager Teara  
7 Farrow Ferman, the certificate holder has a contractual agreement with CTUIR to complete a  
8 traditional use study to support CTUIR and the certificate holder's evaluation of potential  
9 impacts to unknown tribal resources.<sup>63</sup> The Department understands that the traditional use  
10 study is ongoing and acknowledges the certificate holder's request that the results and  
11 potential mitigation, as agreed upon by the certificate holder and CTUIR, be confidential and  
12 coordinated directly between the certificate holder and CTUIR, outside of the EFSC process.

13  
14 *Results of Discovery Measures – Historic and Cultural Resources; Archeological Sites*

15  
16 Previous cultural resource investigations within 1-mile of the analysis area identified 15  
17 archeological sites and 8 archeological objects, which were fully evaluated in the *Final Order on*  
18 *ASC* and 2017 Site Certificate. Resources newly identified during 2018/2019 surveys included 4  
19 historic sites, 1 archeological site, and 2 archeological objects.<sup>64</sup>

20  
21 *National Registry of Historic Places – Eligibility Status*

22  
23 *Archeological Sites*

24  
25 The 2018/2019 surveys identified one archeological site within the new area proposed within  
26 the site boundary. The archeological site (WRH-DM-04) is an abandoned historic agricultural  
27 access road within the proposed solar micrositing corridor. Based on an evaluation under  
28 Criteria A, B, C and D as presented in Exhibit S Attachment S-1, the certificate holder  
29 recommends that the archeological site be considered not likely eligible for National Register of  
30 Historic Places (NRHP) listing. However, following numerous requests from January through  
31 June 2019 by the Department and certificate holder for agency review, SHPO was unable to  
32 provide a response to the Department on the potential eligibility determination. As a  
33 conservative approach, in the absence of SHPO concurrence on potential likely eligibility for  
34 NRHP listing, the Council evaluates the archeological site as likely eligible for NRHP-listing.

---

<sup>62</sup> WRWAMD4Doc3 pRFA Tribal Government Comment CTUIR 2019-02-19. WRWAMD4. DPO Tribal Government Comment. 2019-09-05.

<sup>63</sup> WRWAMD4Doc4 pRFA Tribal Government Comment CTUIR 2019-06-19.

<sup>64</sup> WRWAMD4 Request for Amendment 4, Exhibit S, Attachment S-1. 2019-07-01. As explained in RFA4 Exhibit S Attachment S-1, the presence of, and potential impacts to, a HPRCSIT within the analysis area is unclear at this time. Because the resources are unknown at this time, and CTUIR has affirmed that its concerns have been adequately addressed through the certificate holder's contractual obligation to complete a traditional use study, potential impacts to HPRCSITs are not further addressed in this order.

1 Therefore, potential impacts from proposed RFA4 facility component construction and  
2 operation to WRII-DM-04 are evaluated in this order.

3  
4 *Archeological Objects*  
5

6 The 2018/2019 surveys identified two archeological objects within the new area proposed  
7 within the site boundary. The first identified archeological object (6B2H-MC-ISO-17) is a small  
8 agricultural cache of three hay mowers within the proposed solar micrositing corridor. The  
9 second identified archeological object (WRII-BB-IS-01) is an isolated horseshoe. The certificate  
10 holder recommends that both identified archeological objects be considered not likely eligible  
11 for NRHP-listing. However, following numerous requests from January through June 2019 by  
12 the Department and certificate holder for agency review, SHPO was unable to provide a  
13 response to the Department on the potential eligibility determination. As a conservative  
14 approach, in the absence of SHPO concurrence on potential likely eligibility for NRHP listing, the  
15 Council evaluates the archeological objects as likely eligible for NRHP-listing. Therefore,  
16 potential impacts from proposed RFA4 facility component construction and operation to 6B2H-  
17 MC-ISO-17 and WRII-BB-IS-01 are evaluated in this order.

18  
19 *Built Historic Properties*  
20

21 The 2019 surveys identified four built historic properties including an in-use, modernized  
22 segment of historic road (Lexington-Echo Highway); two in-use modernized segments of  
23 historic road (Bombing Range Road; Strawberry Lane); and, historic buildings within a modern  
24 farm (Starvation Farms). Based on concurrence obtained from Tracy Schwartz at SHPO on  
25 January 29 and July 9, 2019, none of the four built historic properties are likely eligible for  
26 NRHP-listing and therefore these resources and potential impacts to these resources are not  
27 further evaluated in this order.

28  
29 *Potential Impacts to Archeological Sites and Objects*  
30

31 Potential impacts are evaluated for the resources described above as likely eligible for NRHP  
32 listing, including one archeological site and two archeological objects within the proposed new  
33 site boundary area. Potential impacts could include direct impacts from temporary and  
34 permanent disturbance to the resources. In RFA4 Exhibit S, the certificate holder asserts that,  
35 with the exception of one archeological object (WRII-BB-ISO-1 – historic horseshoe), potential  
36 temporary and permanent disturbance impacts from proposed RFA4 facility components to the  
37 identified archeological site (WRII-DM-04 – historic agricultural access road) and other  
38 archeological object (B2H-MC-ISO-17 – historic agricultural cache) would be avoided through  
39 micrositing and final facility component location. Based on the Department's recommendation  
40 that Council evaluate these resources as likely eligible for NRHP-listing, previously imposed  
41 Historic, Cultural and Archeological Resources Condition 3 (CON-HC-01) would apply, which  
42 requires that the certificate holder avoid disturbance within a 200-foot buffer of the resource. If  
43 the buffer restriction cannot be maintained and if there is a change in likelihood of NRHP-

eligibility based on concurrence obtained from SHPO's Archeological Resource specialist prior to construction, the Council amends the condition, as presented below.

The certificate holder describes that potential disturbance impacts could occur to one archeological object (WRII-BB-ISO-1 – historic horseshoe) from the proposed collector line based on final route and construction method. The certificate holder relies on its recommendation that the resource be considered not likely eligible for NRHP-listing to conclude that potential impacts would not be significant. In contrast though and as described above, in the absence of SHPO concurrence on the likelihood of resource eligibility for NRHP-listing, the Council conservatively assumes that the resource be considered likely eligible for NRHP-listing. For these resources, previously imposed Historic, Cultural and Archeological Resources Condition 3 (CON-HC-01) would apply, which requires that the certificate holder avoid disturbance within a 200-foot buffer of the resource.

**Amended Historic, Cultural and Archeological Resources Condition 3 (CON-HC-01):**

~~Immediately~~ 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 ~~should~~ must be removed immediately upon cessation of activities in the area that pose a threat of disturbance to the site being protected.

[Final Order on ASC, Historic, Cultural, and Archeological Resources Condition 3; AMD4]

In addition, Council previously imposed Historic, Cultural and Archaeological Resources Conditions 1 through 5 (PRE-HC-01, PRE-HC-02, CON-HC-01, PRE-HC-03, and CON-HC-02) to avoid and reduce the potential for adverse impacts to historic, cultural, and archaeological resources. Historic, Cultural, and Archeological Resources Condition 4 requires that onsite construction personnel are trained to identify cultural and archaeological resources, and understand the requirements if such resources are discovered during construction; and, Historic, Cultural, and Archeological Resources Condition 5 (CON-HC-02) outlines protocols to

be followed if archeological or cultural resources are inadvertently discovered during construction.

Based upon the analysis presented above and subject to compliance with existing conditions, the finds that the facility, with proposed changes, would not be likely to result in significant adverse impacts to resources protected by the Council's Historic, Cultural and Archaeological Resources standard.

### **Conclusions of Law**

Based on the foregoing analysis, and subject to compliance with existing and recommended amended conditions, the Council finds that the facility, with proposed changes, would continue to comply with the Council's Historic, Cultural, and Archaeological Resources Standard.

### **III.L. Recreation: OAR 345-022-0100**

*(1) Except for facilities described in section (2), to issue a site certificate, the Council must find that the design, construction and operation of a facility, taking into account mitigation, are not likely to result in a significant adverse impact to important recreational opportunities in the analysis area as described in the project order. The Council shall consider the following factors in judging the importance of a recreational opportunity:*

- (a) Any special designation or management of the location;*
- (b) The degree of demand;*
- (c) Outstanding or unusual qualities;*
- (d) Availability or rareness;*
- (e) Irreplaceability or irretrievability of the opportunity.*

\*\*\*65

### **Findings of Fact**

The Recreation standard requires the Council to find that the design, construction, and operation of a proposed facility or facility, with proposed changes, would not likely result in significant adverse impacts to "important" recreational opportunities. Therefore, the Council's Recreation standard applies only to those recreation areas that the Council finds to be "important," utilizing the factors listed in the sub-paragraphs of section (1) of the standard. The importance of recreational opportunities is assessed based on five factors outlined in the standard: special designation or management, degree of demand, outstanding or unusual qualities, availability or rareness, and irreplaceability or irretrievability of the recreational opportunity. The certificate holder evaluates impacts to important recreational opportunities

---

<sup>65</sup> RFA4 facility components do not represent a special criteria facility under OAR 345-0015-0310; therefore, OAR 345-022-0100(2) is not applicable.

based on the potential of construction or operation of the facility, with proposed changes, to result in any of the following: direct or indirect loss of an important recreational opportunity, excessive noise, increased traffic, and visual impacts of facility structures or plumes.

In accordance with OAR 345-001-0010(59)(d) and consistent with the study area boundary, the analysis area for recreational opportunities is the area within and extending 5 miles from the site boundary. RFA4 proposes to expand the site boundary; therefore, the analysis area includes the area within and extending 5-miles from the proposed amended site boundary.

#### *Recreational Opportunities within the Analysis Area*

Important recreational opportunities identified within the 5-mile analysis area include:

- Oregon National Historic Trail High-Potential Segment (1.2 miles from site boundary)
- Oregon Trail Well Spring Interpretive Site (1.2 miles from site boundary)
- Echo Meadows Site/Oregon Trail Area of Critical Environmental Concern (2.5 miles from site boundary)
- Blue Mountain State Scenic Byway (OR-74) (2.6 miles from site boundary)
- Morrow County Fairgrounds (3.0 miles from site boundary)
- Willow Creek Water Park (3.0 miles from site boundary)<sup>66</sup>

#### *Evaluation of Potential Impacts to Important Recreation Opportunities*

Under the Council's Recreation standard, the Council must find that, taking into account mitigation proposed RFA4 facility components would not be likely to result in a significant adverse impact to those identified important recreational opportunities. The Council presents its evaluation of potential impacts below.

As presented above, the six identified important recreational opportunities within the 5-mile analysis area are located between 1.2 to 3 miles from the proposed amended site boundary.

#### *Potential Direct or Indirect Loss of Recreational Opportunity*

Proposed RFA4 facility components would be located entirely within private property and would not be located on or within any of the identified important recreational opportunities. Therefore, proposed RFA4 facility components would not physically disturb, or result in ground disturbance, to the important recreational opportunities identified within the analysis area. The proposed RFA4 facility components would also not require any temporary or permanent closure or removal of the important recreation opportunities to public use. Therefore, the

---

<sup>66</sup> WRWAPDoc196. Final Order on ASC. 2016-05-24. In the Final Order on ASC, the Council disagreed with the certificate holder's representation that Willow Creek Water Park met the criteria for an "important" recreational opportunity. However, the Council included an evaluation of potential impacts to this recreational opportunity.

Council finds that proposed RFA4 facility components would not be expected to result in direct or indirect loss to important recreational opportunities within the analysis area.

### *Potential Noise Impacts*

#### *Construction*

Construction of proposed RFA4 facility components would generate short-term, temporary noise. Noise generating activities during construction could result from the use of heavy machinery, such as heavy trucks, bulldozers, graders and cranes. The certificate holder represents that construction-related noise may be audible at the Well Spring site and the high-potential Oregon Trail segment; however, noise sources would be at distances of 1.2 miles or greater. Existing Noise Control Condition 1 (CON-NC-01) would reduce noise impacts during construction by requiring the use of exhaust mufflers on combustion engine-powered equipment, use of air-inlet silencers, shrouds and shields, as appropriate; and requires that the certificate holder establish a noise complaint response system, including a system for the certificate holder to receive and resolve noise complaints.

Based on the distance from construction activities to the nearest important recreational opportunity and compliance with the above-referenced condition, and because construction related noise would be temporary and short-term in duration, the Council finds that noise generated during construction of proposed RFA4 facility components would not be likely to result in significant adverse impacts at the Oregon Trail Well Spring Interpretive Site. Because the other important recreational opportunities within the analysis area are located at greater distances from the proposed amended site boundary than the Oregon Trail Well Spring Interpretive Site, the Council concludes that potential construction-related impacts at these important recreational opportunities would also not likely be potentially significant or adverse.

#### *Operations*

Operation of proposed RFA4 facility components would generate noise from transformers and inverters associated with the solar arrays, and inverters and cooling systems associated with the distributed battery storage systems. In RFA4, the certificate holder provides a noise analysis inclusive of the facility, as approved, and the operational sources and sound power levels (in A-weighted decibels [dBA]) for proposed RFA4 facility components, as listed below:

- 41 inverters, each at 73 dBA
- 41 distribution transformers, each at 77 dBA
- 1 substation transformer at 98 dBA
- 81 heating, ventilation and air conditioning units, each at 85 dBA

For its analysis, the certificate holder used the Computer Aided Noise Abatement (CadnaA) software program, version 2018 MR1 to make the predictions of peak noise levels at noise-

sensitive receptors within the analysis area. The program includes sound propagation factors adopted from International Organization for Standardization’s (ISO) 9613-2 “Attenuation of Sound during Propagation Outdoors” to account for geometric divergence, atmospheric absorption, reflection from surfaces, screening by topography and obstacles, terrain complexity and ground effects, source directivity factors, seasonal foliage effects, and meteorological conditions. Topographical information was imported into the acoustic model using the official U.S. Geological Survey (USGS) digital elevation dataset to accurately represent terrain in three dimensions. Terrain conditions, vegetation type, ground cover, and the density and height of foliage can also influence the absorption that takes place when sound waves travel over land.

Based on noise modeling presented in RFA4 Exhibit X, operational noise from the facility, as approved and with proposed RFA4 facility components, the closest important recreational opportunity – the Oregon Trail Well Spring Interpretive Site - would experience potential operational sound levels of 31 dBA, comparable to a whisper or wind blowing. Council previously concluded that audible noise levels of 31 dBA would not interfere with the recreational opportunities of the Oregon Trail Well Spring Interpretive Site. Therefore, consistent with Council’s previous findings, the Council finds that operation of the facility, with proposed changes, would not be likely to result in significant adverse noise impacts to any important recreational opportunities within the analysis area.

#### *Traffic*

##### *Construction*

Construction of proposed RFA4 facility components would generate construction-related traffic. In RFA4 Exhibit U, the certificate holder explains that construction of proposed RFA4 facility components would not result in more than 250 workers and that construction of the previously approved wind facility and proposed solar facility components would not be expected to overlap, or that if there were overlapping construction activities, estimated daily passenger car equivalents would not result in greater impacts than those evaluated in the *Final Order on the ASC* – which evaluated impacts from up to 360 workers per day.

Roads that provide access to important recreational opportunities, specifically Oregon Trail Well Spring Interpretive Site and Echo Meadows/Oregon Trail ACEC, which could be impacted by construction-related traffic, include OR-207 and/or Bombing Range Road and Little Juniper Canyon Road. Council previously imposed Public Services Condition 6 (PRE-PS-01) requiring that the certificate holder implement a Traffic Management Plan, as approved by the Department, that would include best management practices (BMP’s) such as traffic control BMP’s and reduction practices to minimize potential construction-related traffic impacts.

Because construction of proposed RFA4 facility components is not expected to increase traffic impacts compared to those considered in Council’s *Final Order on the ASC*, where construction-related traffic impacts at important recreational opportunities were not expected to be significant or adverse, and based upon compliance with Public Services Condition 6 (PRE-PS-01),

1 the Council finds that construction-related traffic impacts would not to be likely to result in a  
2 significant adverse traffic impact to important recreational opportunities within the analysis  
3 area.

4  
5 *Operation*

6  
7 Operation of proposed RFA4 facility components would generate minimal operational-related  
8 traffic. The facility, with proposed changes, would result in 10 to 15 permanent employees.  
9 Based on the low level of permanent employees, the Council finds that operational-traffic  
10 impacts would continue not to be likely to result in a significant adverse impact to important  
11 recreational opportunities within the analysis area.

12  
13 *Visual Impacts*

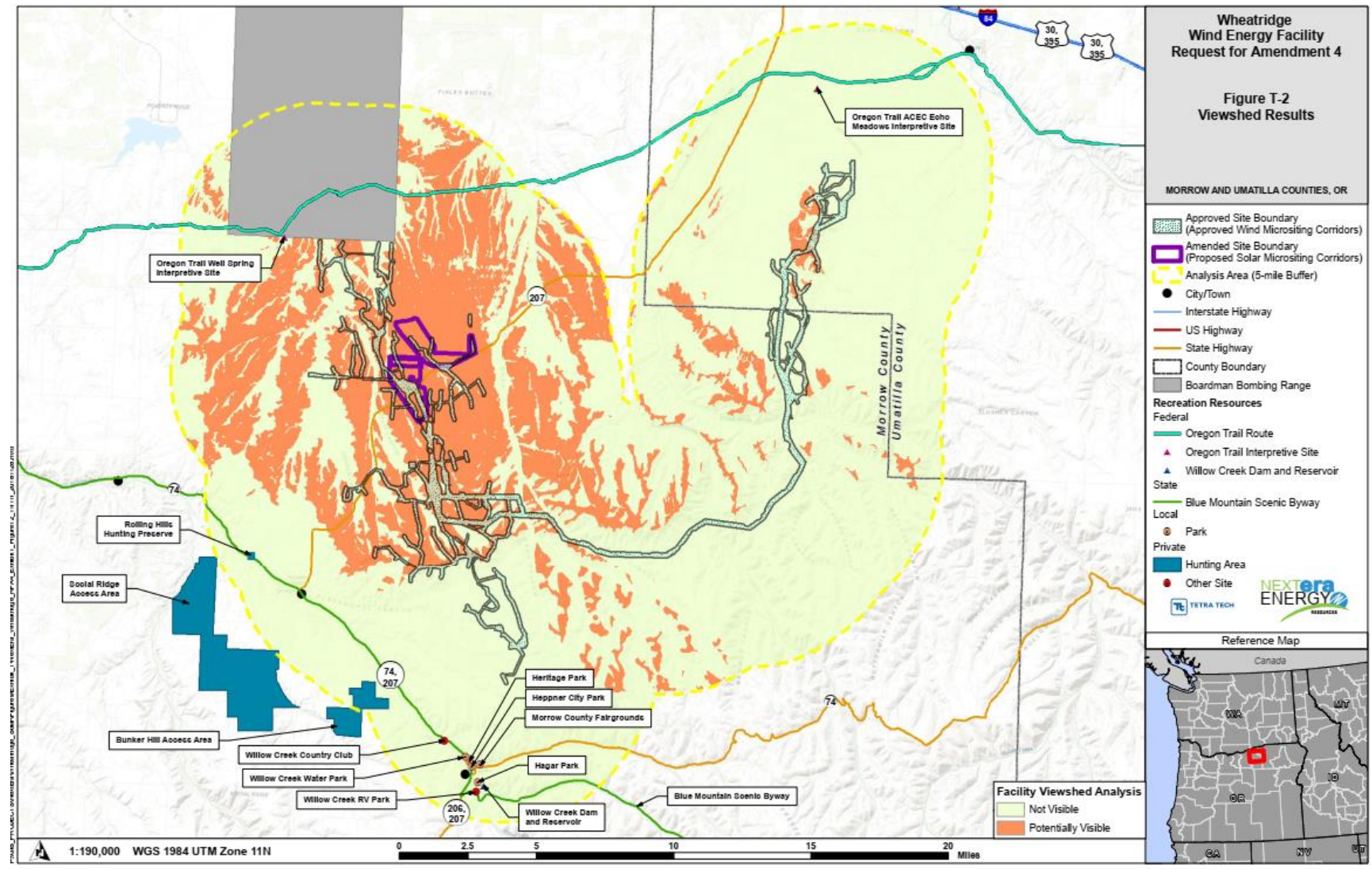
14  
15 Proposed RFA4 facility components which could result in changes to the visual character of the  
16 existing viewshed include solar panels, overhead 34.5 kV collector lines and skid-mounted  
17 inverters and transformers, with the solar panels representing the most dominant visual  
18 element of the proposed components. Solar modules would be mounted on a tracking system  
19 that rotates the modules throughout the day as the sun's angle changes, with a maximum  
20 height of 16 feet at full tilt. The movement of the modules, combined with their antireflective  
21 coating, would minimize glare but would be expected to have the overall appearance of a dark  
22 line on the horizon. Inverter boxes associated with the proposed battery storage systems would  
23 be approximately 12 feet wide, 36 feet long, and 10 feet tall. Aboveground 34.5 kV collector  
24 line structures would be wooden or steel monopole, extending approximately 60 feet in height.

25  
26 In RFA4, the certificate holder provides a zone of visual influence (ZVI) analysis to assess  
27 potential visual impacts to important recreational opportunities. The ZVI analysis evaluated the  
28 landscape using digital bare earth modeling, removing landscape features for a "worse-case"  
29 visibility scenario.

30  
31 Based on the certificate holder's ZVI analysis, as presented in Figure 4: *Viewshed Impacts of*  
32 *Proposed RFA4 Facility Components*, proposed RFA4 facility components would be potentially  
33 visible from some locations along the Oregon Trail Route within the Boardman Bombing Range.  
34 The ZVI analysis demonstrates that proposed RFA4 facility components would not be visible  
35 from important recreational opportunities located 12 miles or greater from the proposed  
36 amended site boundary including: Oregon Trail ACEC Echo Meadows Interpretive Site, the Blue  
37 Mountain Scenic Byway, the Morrow County Fairgrounds, or the Willow Creek Water Park.



1 **Figure 4: Viewshed Impacts of Proposed RFA4 Facility Components**



*Oregon National Historic Trail – High Potential Segment*

The Oregon National Historic Trail – High Potential Segment extends from the eastern edge of the Boardman Bombing Range in a southwest direction to Immigrant Lane and then parallels the road to the western edge of the range and continues to the west. Physical evidence of the trail, i.e. wagon ruts, is still present in much of this 12-mile corridor. However, approximately 7 miles of this segment are within the Boardman Bombing Range and inaccessible to the public except for a small area surrounding the Well Spring site; the remainder of the high-potential segment is on private lands to the west of the Bombing Range (most of which is managed by The Nature Conservancy as part of the Boardman Conservation Area) and is also not open to the public.

Based on the ZVI analysis, while potential visibility of proposed RFA4 facility components was identified, the certificate holder asserts that the likelihood of visibility is low given an approximate 4.5-mile distance between the resource and proposed RFA4 facility components. Most of the high-potential trail segment is within the Boardman Bombing Range and is off-limits to the public, except for a small area surrounding the Well Spring site that is not within an area of potential visibility

*Oregon Trail Well Spring Interpretive Site*

The Oregon Trail Well Spring Interpretive Site is a high-potential Oregon Trail site located on Immigrant Lane adjacent to the southern boundary of the Boardman Bombing Range, approximately 5 miles northwest of the proposed amended site boundary. As explained in RFA4 Exhibit R, Well Spring was an important emigrant water source and campsite. While the spring itself is now essentially dry, trail ruts, a graveyard, and the remains of a stage station can be found nearby.

Based on the ZVI analysis, while potential visibility of proposed RFA4 facility components was identified, the certificate holder asserts that based on the elevation difference between the resource and the proposed RFA4 facility components of 161 feet with several draws and large hills in between, the proposed solar arrays at heights of 16 feet would be blocked from view at the lower-elevation Well Spring site.

Because of the distance between the important recreational opportunities and proposed RFA4 facility components, as well as the existing intervening geographic features, the Council finds that the changes proposed in the amendment request would not likely be likely to result in a significant or adverse visual impact at the important recreational opportunities within the analysis area.

1 **Conclusions of Law**

2  
3 Based on the foregoing findings of fact and conclusions, and subject to compliance with existing  
4 site certificate conditions, the Council finds that proposed RFA4 facility components would  
5 comply with the Council's Recreation standard.  
6

7 **III.M. Public Services: OAR 345-022-0110**

8  
9 *(1) Except for facilities described in sections (2) and (3), to issue a site certificate, the*  
10 *Council must find that the construction and operation of the facility, taking into account*  
11 *mitigation, are not likely to result in significant adverse impact to the ability of public*  
12 *and private providers within the analysis area described in the project order to provide:*  
13 *sewers and sewage treatment, water, storm water drainage, solid waste management,*  
14 *housing, traffic safety, police and fire protection, health care and schools.*  
15

16 *(2) The Council may issue a site certificate for a facility that would produce power from*  
17 *wind, solar or geothermal energy without making the findings described in section (1).*  
18 *However, the Council may apply the requirements of section (1) to impose conditions on*  
19 *a site certificate issued for such a facility.*  
20

\*\*\*

21 **Findings of Fact**

22  
23 The Council's Public Services standard requires the Council to find that a proposed facility or a  
24 proposed facility change is not likely to result in significant adverse impacts on the ability of  
25 public and private service providers to supply sewer and sewage treatment, water, stormwater  
26 drainage, solid waste management, housing, traffic safety, police and fire protection, health  
27 care, and schools. Pursuant to OAR 345-022-0110(2), the Council may issue a site certificate for  
28 a facility that would produce power from wind energy without making findings regarding the  
29 Public Services standard; however, the Council may impose site certificate conditions based  
30 upon the requirements of the standard.  
31

32 In accordance with OAR 345-001-0010(59)(b) and consistent with the study area boundary, the  
33 analysis area for potential impacts to public services from construction and operation of the  
34 facility, with proposed changes, is defined as the area within and extending 10-miles from the  
35 site boundary.  
36

37 In RFA4 Exhibit U, the certificate holder presents its maximum impact analysis as if the facility  
38 components proposed in RFA4 will be constructed in a single phase lasting up to 12 months  
39 after completion of the approved wind facility construction. The certificate holder explains that  
40 construction of the solar arrays (RFA4) is not expected to overlap with construction of the wind  
41 facility except to the extent that efficiencies may be gained from construction of some  
42 elements of the solar arrays.  
43

1 Because the certificate holder assumes there will be minimal overlap between construction of  
2 the solar array and compounds proposed in RFA4 and the approved wind facility, the primary  
3 way in which the modifications proposed under RFA4 will impact public and private services is  
4 by extending the duration of construction from 18 months to up to 30 months.<sup>67</sup> To complete  
5 construction of the proposed solar array and battery systems it is estimated to use a maximum  
6 of 250 workers onsite at one time. This is fewer than the 360 workers that were estimated to  
7 be on site for construction of the wind power facility at the time of the original ASC review and  
8 approval.

9  
10 For purposes of the Public Services impact assessment, the certificate holder assumes that  
11 approximately 80 percent of the construction workforce hired for construction of the solar  
12 arrays will be hired locally (i.e., from within commuting distance of the facility), and the  
13 remaining 20 percent of the workforce will be from out of state or longer distance and will  
14 temporarily relocate to the facility vicinity.

15  
16 The operations and maintenance (O&M) of the proposed solar arrays associated with RFA4 will  
17 require up to two additional staff. The certificate holder maintains that O&M staff will be hired  
18 locally, to the extent that skilled workers are available.

19  
20 *Sewer and Sewage Treatment; Stormwater Drainage*

21  
22 During construction of the proposed changes, the certificate holder maintains portable toilets  
23 will be provided by a licensed subcontractor, who will be responsible for servicing the toilets at  
24 regular intervals and dispose of wastewater in accordance with local jurisdictional regulations.

25  
26 There are not any proposed modifications in RFA4 from the approved use of septic systems at  
27 the O&M buildings during operations. Public Services Condition 1 OPR-PS-01 addresses the on-  
28 site septic system design and capacity. The facility, with proposed changes, would not require  
29 sewage treatment, nor require construction or expansion of public stormwater drainage  
30 facilities. Therefore, construction and operation of the facility, with proposed changes, would  
31 not impact public and private providers of sewer, sewage treatment or stormwater drainage.

32  
33 *Water*

34  
35 During construction, the modifications proposed in RFA4 are anticipated to require an  
36 anticipated average of 36.3 million gallons (Mgal) of water, and up to a maximum, "worse-case"  
37 scenario of 54.5 Mgal during particularly dry and hot weather.<sup>68</sup> As explained in RFA4, Exhibit B,  
38 it is unlikely that concrete foundations will be required for the solar arrays, but for purposes of  
39 the application, impact calculations assume the greatest impact scenario of using concrete

---

<sup>67</sup> WRWAMD4Doc14-22 RFA4 Complete RFA4 Exhibit U. Public Services Final, Section 3.2.1. 2019-07-01.

<sup>68</sup> WRWAMD4Doc14-16 RFA4 Complete RFA4 Exhibit O. Water Req Final, Section 2.1.2. 2019-07-01.

1 foundations for all solar posts. The water use will be primarily for making concrete for solar  
2 panel foundation construction, road construction and dust control on roads. The certificate  
3 holder notes that concrete foundations will be used for inverter equipment, substations,  
4 drainage facilities, and other structures as well.<sup>69</sup> Adding the estimated water use proposed in  
5 RFA4 with the amounts of water usage from the final order on the ASC would put the estimated  
6 water use at 92.8 Mgal under average conditions, and worst-case total water usage for the  
7 facility at 132 Mgal over a 12-month construction period. The certificate holder notes, however,  
8 that these estimates assume the entire facility is under construction at one time and it  
9 anticipates constructing the facility, with proposed changes, in phases or segments.<sup>70</sup> Water  
10 trucks will be used to control dust generation in all disturbed areas during road construction, as  
11 outlined in the Erosion and Sediment Control Plan required in Condition CON-SP-01.

12  
13 The certificate holder intends to use water trucks for the delivery of water from nearby  
14 municipalities with existing water rights. These potential water sources include the cities of  
15 Hermiston, Heppner, Boardman, or other nearby municipalities. In RFA4 Exhibit O, the  
16 certificate holder includes correspondence with these municipalities verifying their tentative  
17 ability to supply water to meet the demands associated with the proposed facility  
18 changes in RFA4. Multiple sources may be used to obtain sufficient quantities of water.

19  
20 No groundwater permit, surface water permit, or water right transfer is anticipated for  
21 construction of the proposed changes, because water will be procured from municipal sources,  
22 as near to the construction sites as reasonably possible. If the certificate holder cannot secure  
23 sufficient water from municipal sources and must seek a limited groundwater license or other  
24 water right, it must request the license or water right via a site certificate amendment and  
25 receive a decision from Council.

26  
27 Operation of the facility, specifically operation and maintenance of the solar arrays associated  
28 with RFA4, may require up to 650,250 gallons of water per year for solar panel washing.<sup>71</sup> This  
29 assumes that washing the panels will take approximately 325,125 gallons of water and that the  
30 solar panel arrays will be washed twice a year. Water will be applied via tanker truck for  
31 cleaning and will not have added solvents or chemicals.

32  
33 Operational water use at the O&M buildings would be served by onsite, permit-exempt wells  
34 and would not result in impacts on the ability of public or private providers of water to deliver  
35 services.

36 The water use associated with the proposed modification in RFA4 will be supplied and is  
37 verified by water service providers near the facility and the Council finds that construction of  
38 the facility, with proposed changes, would continue not to be likely to result in significant  
39 adverse impacts on the ability of public or private providers of water to deliver services.

---

<sup>69</sup> WRWAMD4Doc14-3 RFA4 Complete RFA4 Exhibit B. Project Desc Final, Section 2.4. 2019-07-01.

<sup>70</sup> *Id.*

<sup>71</sup> WRWAMD4Doc14-16 RFA4 Complete RFA4 Exhibit O. Water Req Final, Section 2.2. 2019-07-01.

## *Solid Waste Management*

Construction of the facility, with proposed changes, would generate a small amount of non-hazardous solid waste which will be similar to the types of waste generated by construction of the previously approved wind components. Waste materials generated by construction of the solar components will primarily consist of concrete waste and packaging materials. The certificate holder estimates that construction of the changes proposed in RFA4 would produce approximately 2,000 cubic yards of waste, which will be disposed of following the Construction Waste Management Plan in Public Service Condition 3 (CON-PS-01) and Waste Minimization Condition 2 (PRE-WM-01).<sup>72</sup> Solid waste generated from construction of the changes proposed in RFA4 also include dirt and soil excess from access road construction, grading and excavation for the solar array foundations, support structures, and the collector substation expansion. These materials would only be spread as appropriate, with adequate measures for soil conservation and erosion and sediment control, as required by the Erosion and Sediment Control Plan in Soil Protection Condition 1 (CON-SP-01). Exhibit U RFA4 explains that solid waste from construction are anticipated to be disposed at the Finley Butte Landfill, which has adequate capacity to serve the facility, with proposed changes. The certificate holder provided evidence of this through correspondence with the landfill manager.

Operation of the facility, with proposed changes, would not result in a significant increase in solid waste generation as previously evaluated by Council. The certificate holder assumes that no more than 2 cubic yards of waste would be produced monthly based on the addition of the proposed solar arrays and battery storage, for a total of up to 8 cubic yards of waste for the facility as a whole, to be disposed of consistent with Public Services Condition 5 (GEN-PS-01) so that the certificate holder coordinates with DEQ and Morrow County.

As discussed in the *Final Order on AMD2* and in RFA4, lithium-ion system will require regular change out of batteries as they degrade over time, and batteries will be replenished at a rate depending on usage where a battery cycled frequently will need to be replaced more often. The certificate holder explains that a group of approximately 11 lithium-ion battery cells or a “rack” per 1 MW will be replaced every 3 years over the life of the Facility (50 years), and at this replacement rate, approximately 27,500 battery racks will be used over operation term of the battery storage systems.<sup>73</sup> Council previously imposed Organizational Expertise Condition 10 (GEN-OE-04) to ensure the certificate holder utilizes a licensed hauler for battery transport and that the handling guidelines of 49 Code of Federal Regulations 173.185 – Department of Transportation Pipeline and Hazardous Material Administration related to the transport of lithium ion batteries is followed.

---

<sup>72</sup> WRWAMD4Doc14-23 RFA4 Complete RFA4 Exhibit V. Waste Final Section 2.1.1. 2019-07-01.

<sup>73</sup> WRWAMD4Doc14-9 RFA4 Complete RFA4 Exhibit G. Materials Analysis Final, Section 3.2. 2019-07-01.

1 Construction and operation of the proposed solar and battery storage facilities are not  
2 expected to substantially increase solid waste generation, and based on compliance with  
3 previously imposed conditions, the Council finds that the facility, with proposed changes, would  
4 not be likely to result in a significant adverse impact on the ability of public and private  
5 providers of solid waste management to deliver services.

#### 6 7 *Traffic Safety*

8  
9 The certificate holder explains in RFA4, Exhibit U that transportation routes used to access the  
10 solar micrositing corridors will be the same as those used to access the previously approved site  
11 boundary areas and that there are not new transportation services identified as a result of the  
12 proposed changes in RFA4. The primary transportation routes used for construction that was  
13 evaluated in the *Final Order on ASC* are I-84 and OR-207, and the following major county roads  
14 would convey significant amounts of construction traffic: Bombing Range Road, Big Butter  
15 Creek Road, Little Butter Creek Road, Baseline Road, Juniper Lane, Strawberry Lane, and Sand  
16 Hollow Road in Morrow County.

17  
18 Construction of the proposed solar and battery storage systems would generate construction-  
19 related traffic; however, in RFA4, the certificate holder explained that potential traffic impacts  
20 (i.e. vehicle trip generation) from construction of the proposed modifications would be less  
21 than the impacts evaluated by Council in the *Final Order on the ASC* because construction of the  
22 changes proposed in RFA4 are not expected to overlap with the construction of the previously  
23 approved wind facility. Construction traffic associated with RFA4 is expected to peak at  
24 approximately 5-10 trucks per day for a 6-month period, primarily related to the delivery of  
25 solar module and tracker components and concrete.<sup>74</sup>

26  
27 In the *Final Order on the ASC*, Council evaluated the certificate holder's estimate that  
28 construction-related traffic would generate an additional 192 round trips per day (384 one-way  
29 trips), with that number increasing to 288 round trips per day (576 one-way trips) during peak  
30 construction. Council previously imposed Public Services Condition 6 (PRE-PS-01) requiring that,  
31 prior to construction, the certificate holder coordinate with ODOT and county road officials to  
32 develop and implement a Traffic Management Plan, as approved by the Department, that  
33 would include best management practices (BMP's) to minimize potential construction-related  
34 traffic impacts. BMP's include maintaining emergency vehicle access to private property, using  
35 chase vehicles if required by ODOT, and notifying nearby landowners prior to the start of  
36 construction. Public Services Condition 7 (PRE-PS-02) requires the certificate holder to enter  
37 into road use agreements with counties that will outline, at a minimum, a pre-construction  
38 assessment of road surfaces, construction monitoring, and post-construction inspection and  
39 repair. Council previously imposed Public Services Condition 8 (PRE-PS-03), which requires new  
40 road construction to be compliant with the applicable county road design standards. The  
41 operations and maintenance of the proposed solar arrays and battery storage facilities

---

<sup>74</sup> WRWAMD4Doc14-22 RFA4 Complete RFA4 Exhibit U. Public Services Final, Section 3.2.1. 2019-07-01.

1 associated with RFA4 will require up to two additional staff. The certificate holder maintains  
2 that O&M staff will be hired locally, to the extent that skilled workers are available. The  
3 additional staff hired to operate the solar facilities are not expected to significantly impact  
4 existing traffic volumes. These conditions would continue to apply to the RFA4 components of  
5 the facility.

6  
7 Construction of the proposed solar and dispersed battery storage facilities is not anticipated to  
8 significantly overlap with the construction of the other approved (wind) facility components.  
9 The certificate holder maintains that the total amount of construction personnel necessary for  
10 the construction of RFA4 modifications is less than the number of workers estimated to  
11 construct previously-approved facility components and the operational staff will not impact  
12 existing traffic volumes during operation. Based on the findings presented here and compliance  
13 with previously imposed conditions, the Council finds that the facility, with proposed changes,  
14 would not be likely to result in a significant adverse impact to the ability of public or private  
15 providers of traffic safety.

16  
17 *Air Traffic*

18  
19 The facility modifications proposed in RFA4 are not anticipated to impact air traffic safety.  
20 Council previously imposed Public Services Condition 9 (PRE-PS-04) which requires the  
21 certificate holder to submit a FAA form 7460-1 to the FAA and the Oregon Department of  
22 Aviation (Aviation) in accordance with ORS 836.535(2)(a) requesting a determination of No  
23 Hazard in order to allow the agency to evaluate the effect of the proposed construction on air  
24 safety and navigable airspace.

25  
26 Because the facility, with proposed changes, is not anticipated to have any impacts on air traffic  
27 safety and based on the previously imposed site certificate condition, the Council finds that the  
28 facility, with proposed changes, would not be likely to result in a significant adverse impact to  
29 the ability of public or private providers of air traffic safety.

30  
31 *Police Protection*

32  
33 The certificate holder explains in RFA4, that there are not any new law enforcement services  
34 within the analysis area and that construction and operation of the solar and dispersed battery  
35 systems is not anticipated to overlap with the construction of the approved facility  
36 components, therefore there will be fewer workers present compared to the Council's previous  
37 evaluations.<sup>75</sup> The certificate holder explains that construction of the entire facility is expected  
38 to be extended from approximately 18 months to approximately 30 months and evidences  
39 correspondence with the county sheriff's departments verifying that they will still be able to  
40 respond to incidents at the proposed facility site. Council previously imposed Public Service  
41 Conditions 10 (CON-PS-02) and 12 (OPR-PS-04) requiring that, during construction and

---

<sup>75</sup> WRWAMD4Doc14-22 RFA4 Complete RFA4 Exhibit U. Public Services Final. Section 3.4.7.1. 2019-07-01.



1 operations, the certificate holder provide 24-hour private security, and ensure that law  
2 enforcement agencies have up-to-date contact information of relevant facility staff,  
3 respectively. Additionally, Council previously imposed Public Health and Safety Standards for  
4 Wind Facilities Condition 2 (OPR-WF-01) requiring that facility substations be fenced with  
5 locked gates.

6  
7 The Council finds that based upon compliance with existing conditions, construction and  
8 operation of the facility, with proposed changes, would not be likely to result in a significant  
9 adverse impact on the ability of public and private police providers to provide services.

#### 10 11 *Fire Protection*

12  
13 The proposed solar and dispersed battery storage systems could, during an unanticipated fire-  
14 related emergency, result in impacts to the ability of public and private providers of fire  
15 protection to provide services.

16  
17 During construction, the certificate holder explains that the greatest risk of fire on the site is  
18 from welding and metal cutting for foundation rebar frames, and vehicles and construction  
19 equipment use in areas of tall, dry grass.<sup>76</sup> As noted in the above, the certificate holder explains  
20 that concrete foundations will be used for components proposed in RFA4 such as inverter  
21 equipment, substations, drainage facilities, and may be used for the solar arrays. Other fire  
22 hazards associated with construction can result from workers smoking, refueling vehicles and  
23 equipment, and operating or parking vehicles and other equipment off roadways in areas of tall  
24 dry grass that could ignite upon contact with hot vehicle parts. The certificate holder describes  
25 its methods for reducing fire danger during through the implementation of safe working  
26 practices, such as maintaining adequate firefighting equipment and water supplies on site,  
27 conducting metal cutting and welding within a cleared or graveled area, and preventing parking  
28 of vehicles in areas with high, dry grass. The Council previously imposed Public Services  
29 Condition 17 (CON-PS-05), which requires the certificate holder to maintain a vegetation  
30 clearance area around construction sites including turbines and towers and any areas where  
31 work includes welding, cutting, grinding, or other flame- or spark-producing operations  
32 including. The Council highlights that the sites where foundations may be used are considered  
33 areas where work may include welding, cutting, grinding, or other flame- or spark-producing  
34 operations, and that compliance with this condition in areas where foundations will be  
35 constructed as part of RFA4, would reduce the risk of construction-related fires and impacts to  
36 fire service providers. To further reduce the potential for fire hazards during construction, the  
37 Council previously imposed Public Services Condition 18 (GEN-PS-03) requiring that, prior to  
38 construction and operation, the certificate holder provide employee fire prevention and  
39 response training for facility fire hazards, fire safety, emergency notification procedures, use of  
40 fire safety equipment. Public Services Condition 13 (PRE-PS-05) also requires that, prior to  
41 construction, the certificate submit to the Department for review and approval, in consultation

---

<sup>76</sup> WRWAMD4Doc14-3 RFA4 Complete RFA4 Exhibit B. Project Desc Final, Section 2.4. 2019-07-01.

1 with the appropriate local fire protection districts (including the City of Heppner Volunteer Fire  
2 Department, Ione Rural Fire Protection District, and Echo Rural Fire Protection District), an  
3 Emergency Management Plan. The certificate holder provides evidence of correspondence with  
4 responsive local fire service providers in Attachment U-3 through U-5 of RFA4, Exhibit U,  
5 following up to verify that the construction and operation of the facility, with proposed changes  
6 will not adversely impact their ability to provide fire protection services.

7  
8 The certificate holder explains in RFA4, that the risk of fires related to the operation of the solar  
9 arrays and battery storage systems is minimal. The facility electrical equipment will meet the  
10 standards of the National Electrical Code and the Institute of Electrical and Electronics  
11 Engineers, reducing fire risk and maintaining safety standards. Facility roads may act as a fire  
12 break from fires ignited on-site and from impacts to the facility from fire ignited off-site. Facility  
13 roads will be sufficiently sized for emergency vehicle access in accordance with the most  
14 updated Oregon Fire Code (Section 503 and Fire Apparatus Access Roads). Specifically, internal  
15 roads at the solar array sites will be all-weather, compacted gravel and approximately 20 feet  
16 wide, with an internal turning radius of 28 feet which serves and sufficient emergency access.

17  
18 The solar array sites will be maintained to allow preexisting vegetation to continue growing to  
19 the extent such conditions would not interfere with any required post-construction operational  
20 requirements. The portions of the solar arrays that will be graded during construction will be  
21 replanted with a low-growing mix of grasses. The site will be mowed as needed to a height no  
22 more than 3 inches, for fire safety requirements and to keep vegetation from interfering with  
23 operations and maintenance activities.<sup>77</sup> The certificate holder will control for weeds in these  
24 areas by treating weeds using a combination of mechanical methods and herbicides.

25  
26 As discussed in *Final Order on AMD2* and in RFA4, the lithium-ion battery systems will be kept in  
27 a temperature-controlled containers, with individual battery modules isolated to prevent the  
28 spread of fire if it were to occur. The storage systems will include a gas pressured deluge fire  
29 suppression system, as designed by the battery manufacturer and in accordance with the  
30 guidelines outlined in NAFB 855 and/or other updated guidance applicable to energy storage at  
31 the time of construction to provide for safe operation and monitoring. The following measures  
32 will be implemented for lithium-ion systems to minimize fire and safety risks:

- 33
- 34 • The battery systems will be stored in completely contained, leak-proof modules;
  - 35 • The battery storage systems will be maintained within a 100-foot vegetation free area  
36 as per Public Services Condition 23 (GEN-PS-04);
  - 37 • O&M staff will conduct monthly inspections of the battery systems according to the  
38 manufacturer's recommendations as outlined in Retirement and Financial Assurance  
39 Condition 6 (OPR-RF-01);
  - 40 • Battery storage and fire protection systems will comply with applicable standards  
41 specified by Morrow County Building Department through the permitting process,

---

<sup>77</sup> WRWAMD4Doc14-3 RFA4 Complete RFA4 Exhibit B. Project Desc Final, Section 2.4. 2019-07-01.

which will include the 2014 Oregon Structural Specialty Code et. seq., as documented through the facility's building permit application(s) as discussed in Land Use Condition 3 (PRE-LU-01);

- An emergency management plan will also be developed with response procedures in the event of an emergency, such as a fire as required in Public Services Condition 13 (PRE-PS-05) and Public Services Condition 19 (PRO-PS-02).
- Organizational Expertise Condition 10 (GEN-OE-04) and Public Services Condition 4 (OPR-PS-03) ensure that onsite handling, storage and transportation of batteries satisfies the requirements of 49 CFR 173.185, which minimizes potential of dangerous evolution of heat and short-circuiting.

The Council finds that compliance with existing conditions would continue to minimize potential adverse impacts from construction and operation of the facility, with proposed changes, to public and private providers of fire protection services.

### *Housing*

As discussed in RFA4, and in this section, the certificate holder anticipates that the construction of the solar and battery storage components proposed in RFA4 will not overlap with the previously approved wind components and related or supporting facilities. This may extend the duration of construction from 18 months to up to 30 months, which could lead to some construction workers staying within the analysis area longer than previously evaluated by Council. To complete construction of the proposed RFA4 modifications the certificate holder estimates a maximum of 250 workers onsite at one time, which is fewer than the 360 workers that were estimated in the ASC to be on site for construction of the previously approved wind power facility. Construction workers who are not residents of the area typically stay in temporary accommodations such as hotels or motels, apartments, short-term rental homes, campgrounds, or other areas where workers can park mobile housing (e.g., trailers or recreational vehicles). As noted above, the certificate holder anticipates that approximately 80% of the construction workforce may be local residents that would commute from their homes to the facility site.

Statewide occupancy rates for hotels and motels is 70.3 percent, with rural regions in Oregon having lower occupancy rates than the Portland Metropolitan area.<sup>78</sup> In RFA4, Exhibit U, the certificate holder provides updated rental housing supply and availability data for Morrow and Umatilla counties, as reported in the 2017 US Census and 2016 US Census Estimates. The estimated number of vacant rental units is calculated as a percentage of total vacant housing units; that percentage is based on the ratio of renter-occupied dwellings to owner-occupied dwellings. Based on this data, the certificate holder estimates that there is approximately 1,320 vacant rental units available within the analysis area, which includes apartments and house rentals.

---

<sup>78</sup> WRWAMD4Doc14-22 RFA4 Complete RFA4 Exhibit U. Public Services Final, Section 3.3.4. 2019-07-01.

During operations, the applicant estimates that approximately two additional staff would be necessary to operate the facility components associated with the solar and battery storage systems. These staffing additions are not expected to significantly impact housing services within the analysis area.

Based upon the update information provided in RFA4, and that it is anticipated that there will be fewer works present to construct and operate the solar and battery storage components that will need housing, the Council finds that the construction and operation of the facility are not likely to result in significant adverse impacts to the ability of public and private housing providers to deliver housing.

### *Schools and Healthcare*

Construction and operation of the facility, with the modifications proposed in RFA4, are not likely to result in significant adverse impacts to the ability of public and private healthcare and education service providers to render their services. The certificate holder describes that there are not any new public or private healthcare facilities within the analysis area since Council reviewed the ASC.

Healthcare service providers nearest to the include:

- Pioneer Memorial Hospital (Heppner, OR)
- Good Shepherd Medical Center (Hermiston, OR)
- Mid-Columbia Medical Center (Level III trauma center, the Dalles, OR)
- Oregon Health & Science University Hospital and Legacy Emmanuel Medical Center (for serious injuries needing Life Flight)

The ambulance service provider that services the area is Morrow County Health District's Emergency Medical Services as well as nearby fire districts that have first responder vehicles.

To reduce the potential impact to health service providers, the Council previously imposed Public Services Condition 20 (PRE-PS-06) which requires the certificate holder, prior to construction, develop and submit a health and safety plan. The health and safety plan will include preventative measures, important telephone numbers, location of emergency and fire equipment, as well as contact information for hospitals. The Council also imposed Public Services Condition 21(PRE-PS-07) which requires the certificate holder to ensure that construction personnel remain current in their first aid/CPR/AED certifications.

During operations, the applicant estimates that approximately two additional staff would be necessary to operate the facility components associated with the solar and battery storage systems. These staffing additions are not expected to significantly impact healthcare services within the analysis area.

1 Because the estimated amount of workers on site to construct the facility components  
2 proposed in RFA4 is less than that Council previously evaluated in the ASC, considering that  
3 many of the workers will be local residents, and based on compliance with existing site  
4 certificate conditions, the Council finds that the construction and operation of the facility are  
5 not likely to result in significant adverse impacts to the ability of public and private healthcare  
6 providers to deliver healthcare services.

7  
8 Education service providers (schools) are not likely to be impacted by the facility, with proposed  
9 changes. Construction will be temporary, with most of the peak work period will occur during  
10 the summer months when school is not in session. Additionally, most construction workers are  
11 anticipated to be local residents.

12  
13 Because the construction of the modifications included in RFA4 is expected to be additive to the  
14 previously-approved facility components, extending the possible construction duration, it is  
15 possible that construction could extend into the school year. Two school districts are located  
16 within the analysis area, Morrow County School District No 1 and Echo School District No. 5 in  
17 Umatilla County. Most construction workers would be local residents. Workers from outside  
18 the area that are hired for construction are unlikely to relocate with their families, considering  
19 the short-term duration of RFA4 construction.

20  
21 During operations, the applicant estimates that approximately two additional staff would be  
22 necessary to operate the facility components associated with the solar and battery storage  
23 systems. These staffing additions are not expected to significantly impact schools within the  
24 analysis area.

25  
26 Because the estimated amount of workers on site to construct the facility components  
27 proposed in RFA4 is less than Council previously evaluated in the ASC, considering that many of  
28 the workers will be local residents, and based on compliance with existing site certificate  
29 conditions, the Council finds that the construction and operation of the facility are not likely to  
30 result in significant adverse impacts to the ability of public and private schools to deliver  
31 education services.

### 32 33 **Conclusions of Law**

34  
35 Based on the foregoing analysis, and subject to the existing conditions, the Council finds that  
36 the facility, with proposed changes, would continue to comply with the Council's Public Services  
37 standard.

### 38 39 **III.N. Waste Minimization: OAR 345-022-0120**

40  
41 *(1) Except for facilities described in sections (2) and (3), to issue a site certificate, the Council*  
42 *must find that, to the extent reasonably practicable:*  
43

1           (a) *The applicant's solid waste and wastewater plans are likely to minimize generation*  
2           *of solid waste and wastewater in the construction and operation of the facility, and*  
3           *when solid waste or wastewater is generated, to result in recycling and reuse of such*  
4           *wastes;*

5           (b) *The applicant's plans to manage the accumulation, storage, disposal and*  
6           *transportation of waste generated by the construction and operation of the facility*  
7           *are likely to result in minimal adverse impact on surrounding and adjacent areas.*  
8

9           (2) *The Council may issue a site certificate for a facility that would produce power from*  
10          *wind, solar or geothermal energy without making the findings described in section (1).*  
11          *However, the Council may apply the requirements of section (1) to impose conditions on*  
12          *a site certificate issued for such a facility.*

13          \*\*\*

#### 14          **Findings of Fact**

15  
16          The Waste Minimization standard requires the Council to find that the certificate holder will  
17          minimize the generation of solid waste and wastewater, and that the waste generated would  
18          be managed to minimally impact surrounding and adjacent areas. Pursuant to OAR 345-022-  
19          0020(2), the Council may issue a site certificate for a wind or solar facility without making  
20          findings regarding the Waste Minimization standard; however, the Council may impose site  
21          certificate conditions based upon the requirements of the standard.  
22

#### 23          *Solid Waste and Wastewater*

##### 24                  *Construction*

25  
26  
27          Construction of proposed RFA4 facility components would generate approximately 2,000 cubic  
28          yards of solid waste predominately in the form of concrete waste, packaging materials and  
29          small amounts of dirt and rock spoils. Construction of proposed RFA4 facility components  
30          would generate sanitary wastewater and concrete washwater during concrete production for  
31          foundations. Council previously imposed Waste Minimization Condition 2 (PRE-WM-01) and  
32          Public Service Condition 3 (CON-PS-01) requiring that the certificate holder, prior to  
33          construction, develop a waste management plan, to be implemented during construction. The  
34          conditions require that the plan include measures for recycling and segregating waste, and  
35          discharging concrete wash water onsite, when possible. Based on the low level of construction-  
36          related waste and waste water anticipated during construction, and compliance with previously  
37          imposed conditions, the Council finds that proposed RFA4 facility components would continue  
38          to minimize and manage solid waste and wastewater, resulting in minimal adverse impacts on  
39          surrounding and adjacent areas from construction of proposed RFA4 facility components.  
40

##### 41                  *Operations*

1 Operation of proposed RFA4 facility components is expected to generate small amounts of solid  
2 waste, in quantities of approximately 2 cubic yards per month, from packing materials for  
3 replacement equipment components and office-related waste. During ongoing operations and  
4 maintenance, regular replacement of batteries would occur as they degrade over time,  
5 estimated to result in replacement of 11 battery racks per 1 MW every 3 years for the life of the  
6 facility. The certificate holder asserts that spent batteries would be transported and disposed of  
7 at a landfill permitted to handle such waste by a licensed third-party entity. The certificate  
8 holder also describes that waste generated from solar arrays would be recycled where feasible.  
9 Council previously imposed Public Services Condition 4 (OPR-PS-03) requiring that, during  
10 operation, the certificate holder implement a waste management plan. The condition requires  
11 that the certificate holder train employees to minimize and recycle solid waste; segregate  
12 hazardous and non-hazardous waste; and utilize a licensed waste hauler for offsite removal and  
13 transport to a licensed waste management facility.<sup>79</sup> In RFA4 Exhibit V, the certificate holder  
14 identifies solar panel washwater as wastewater; however, the Department would not consider  
15 solar panel washwater as wastewater that could impact surrounding areas as no soaps,  
16 detergents, or additives would be allowed for use in the washwater. Based on compliance with  
17 the previously imposed condition, and minimal amounts of operational solid waste, the Council  
18 finds that proposed RFA4 facility components would continue to minimize and manage solid  
19 waste and wastewater, resulting in minimal adverse impacts on surrounding and adjacent areas  
20 from operation of proposed RFA4 facility components.

### 21 **Conclusions of Law**

22  
23  
24 Based on the foregoing analysis, and subject to existing conditions, the Council finds that that  
25 proposed RFA4 facility components would continue to comply with the Council's Waste  
26 Minimization standard.

### 27 **III.O. Division 23 Standards**

28  
29  
30 The Division 23 standards apply only to "nongenerating facilities" as defined in ORS  
31 469.503(2)(e)(K), except nongenerating facilities that are related or supporting facilities. The  
32 facility, with proposed changes, would not be a nongenerating facility as defined in statute and  
33 therefore Division 23 is inapplicable to proposed RFA4 facility components.

### 34 **III.P. Division 24 Standards**

35  
36  

---

<sup>79</sup> WRWAMD4. pRFA SAG Comments Morrow County 2019-02-21. In a comment provided during review of pRFA4, Morrow County Planning Director Carla McClane requested that the Council consider a new or revised condition to address disposal of photovoltaic components. However, Council previously imposed Public Services Condition 4 (OPR-PS-03) which would apply to the disposal of photovoltaic components and would ensure that materials are recycling to the extent feasible and disposed of at a facility permitted to handle such waste. Therefore, the Council does not impose additional conditions to address this comment.

The Council's Division 24 standards include specific standards for the siting of energy facilities, including wind projects, underground gas storage reservoirs, transmission lines, and facilities that emit carbon dioxide.

In the *Final Order on the ASC*, Council assessed its two specific standards for wind energy facilities. These standards are the Public Health and Safety Standards for Wind Energy Facilities (OAR 345-024-0010) and Cumulative Effects Standard for Wind Energy Facilities (OAR 345-024-0015). Under the Public Health and Safety Standards for Wind Energy Facilities, the Council must evaluate a certificate holder's proposed measures to exclude members of the public from proximity to the turbine blades and electrical equipment, and the certificate holder's ability to design, construct and operate the facility to prevent structural failure of the tower or blades and to provide sufficient safety devices to warn of failure. Under the Cumulative Effects Standard for Wind Energy Facilities standard, Council must find that the certificate holder has demonstrated that it would use practicable measures to reduce the cumulative adverse environmental effects from roads, transmission lines, substations, impacts to raptors and other vulnerable species, visual features and lighting-related glare. As presented in the *Final Order on the ASC* and subsequent orders, Council made findings of fact that the certificate holder and the facility, as approved, would satisfy the requirements of the standards.

The facility modifications proposed in RFA4 are specific to solar energy generation equipment. Therefore, because the two above-described standards are specific to wind energy generation equipment, these standards are not applicable to RFA4 and not evaluated in this order.

### III.P.1. Siting Standards for Transmission Lines: OAR 345-024-0090

*To issue a site certificate for a facility that includes any transmission line under Council jurisdiction, the Council must find that the applicant:*

- (1) Can design, construct and operate the proposed transmission line 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;*
- (2) Can design, construct and operate the proposed transmission line so that induced currents resulting from the transmission line and related or supporting facilities will be as low as reasonably achievable.*

### **Findings of Fact**

This standard addresses safety hazards associated with electric fields around transmission lines. Section (1) of OAR 345-024-0090 sets a limit for electric fields from transmission lines of not more than 9 kV per meter at one meter above the ground surface in areas that are accessible to the public. Section (2) requires implementation of measures to reduce the risk of induced current.



1 Proposed RFA4 facility components include an electrical collection system that would connect  
2 electrical output from the solar modules and transmit produced electricity to the Wheatridge  
3 West collector substation. The proposed electrical collection system would predominately be  
4 comprised of underground 34.5 kV transmission lines located within the proposed new site  
5 boundary area (i.e. within the proposed solar arrays). However, there would be up to two 34.5  
6 kV collector lines that would extend approximately 2.32 and 0.66-miles outside of the proposed  
7 solar array fenceline.

8  
9 The Council's Siting Standards for Transmission Lines apply to "any transmission line under  
10 Council jurisdiction."<sup>80</sup> The Council does not have a definition of "transmission line," and while  
11 the collector lines proposed outside of the perimeter fenceline would be lower voltage than  
12 then the transmission lines that typically connect a large energy facility to the point of  
13 interconnection with the regional electric grid (e.g., 115 kV or 230 kV), because the collector  
14 lines may be "accessible to the public," the Department has reviewed and applied the standard  
15 to ensure appropriate evaluation of public health and safety risks. The certificate holder  
16 included its assessment of compliance with the standard in RFA4 Exhibit AA.

17  
18 The certificate holder does not propose a specific right-of-way width defined for the 34.5-kV  
19 collector lines. It represents that the collector system will occupy private land pursuant to  
20 leases or easements with landowners or road authority and the leases would authorize  
21 placement of the cables and restrict inconsistent or competing uses of the property, however,  
22 these agreements would not contain any defined right-of-way with a fixed width.

#### 23 24 *Electric Fields*

25  
26 As explained in RFA4 Exhibit AA, electric fields around transmission lines are produced by the  
27 presence of an electric charge, measured as voltage, on the energized conductor. Electric field  
28 strength is directly proportional to the line's voltage; that is, increased voltage produces a  
29 stronger electric field. The strength of the electric field is inversely proportional to the square of  
30 distance from the conductors; the electric field strength declines as the distance from the  
31 conductor increases. The strength of the electric field is measured in units of kilovolts per meter  
32 (kV/m). Magnetic fields around transmission lines are produced by the movement of electrical  
33 charge, measured in terms of amperage, through the conductors. Like the electric field, the  
34 magnetic field alternates at a frequency of 60 Hz. Magnetic field strength is expressed in units  
35 of milligauss (mG). The magnetic field strength is directly proportional to the amperage; that is,  
36 increased current flow resulting from increased power flow through the line produces a  
37 stronger magnetic field.

38  
39 The proposed electric collection system would consist of above- and belowground 34.5 kV  
40 collector lines comprised of an insulated, stranded aluminum or copper conductor with a total  
41 diameter of the collector line cable of less than 3 inches. The electric field would be totally

---

<sup>80</sup> OAR 345-024-0090

contained within the insulation of the cable and the soil over the line for underground circuits. Each cable would have a semiconducting insulation shield and a grounded concentric neutral, made up of multiple strands of copper wire that encircle the cable just under the outer jacket, so there is no measurable voltage to ground, or between other cable jackets. Because the electric field is contained within the buried cables or shielded by the earth, no electric field is measurable at the surface of the ground. However, underground cables and the soil in which they are buried do not shield the magnetic fields generated in the conductors, so the net magnetic field of these cables is measurable on the surface of the ground above the cables.

The proposed electric collection system is designed to be installed underground, however, there may be some segments where the collection lines would be aboveground to avoid environmental or other constraints. The peak line loading value assumed for each overhead circuit is 60 megavolt amperes, or approximately 1,000 amperes per phase conductor for each overhead collector circuit. This value is used for both the single and double circuits. The minimum conductor-to-ground clearance for the aboveground 34.5 kV collector lines is assumed to be 25 feet, consistent with the previously imposed Siting Standard Condition 1 (CON-TL-01).

In RFA4, the certificate holder calculated the electric fields, measured in units of kilovolts per meter (kV/m) for the 34.5 kV collector lines that would extend of the perimeter fenceline of the proposed photovoltaic solar power generation equipment using the Corona and Field Effect Program (CAFE), developed by the Bonneville Power Administration (BPA) and is based on the methods and equations developed by the Electric Power Research Institute (EPRI). The CAFE program default environmental parameters of 1 inch per hour precipitation and 2.0 miles per hour wind speed were used to model wet-weather conditions as well during peak load operational conditions. The certificate holder notes in RFA4 that EMF levels under normal operating conditions would be lower than indicated by the CAFE analysis.<sup>81</sup> The results of the analysis for the collector line configurations proposed in RFA4 are provided below in Table 7: *Calculated Electric Field and Magnetic Field Values for 34.5-kV Collector Lines*.

**Table 7: Calculated Electric Field and Magnetic Field Values for 34.5-kV Collector Lines**

Line Description	Electric Field (kV/m)				
	200 feet Left	75 feet Left	Peak Value	75 feet Right	200 feet Right
34.5-kV Underground	None Detectible: See Note 1 and Note 2				
34.5-kV Overhead Single-Circuit	0.00	0.02	0.34	0.02	0.00
34.5-kV Overhead Double- Circuit	0.00	0.00	0.23	0.00	0.00
Line Description	Magnetic Field (mG)				
	200 feet Left	75 feet Left	Peak Value	75 feet Right	200 feet Right
34.5-kV Underground	0.0	Note 1	6.95	Note 1	0.0
34.5-kV Overhead Single-Circuit	1.00	6.40	73.30	7.09	1.05

<sup>81</sup> WRWAMD4Doc14-26 RFA4 Complete RFA4 Exhibit AA. EMF Final, Section 2.2.2 and 2.2.3. 2019-07-01.

**Table 7: Calculated Electric Field and Magnetic Field Values for 34.5-kV Collector Lines**

Line Description	Electric Field (kV/m)				
	200 feet Left	75 feet Left	Peak Value	75 feet Right	200 feet Right
34.5-kV Overhead Double- Circuit	0.21	2.20	38.19	2.20	0.21
Note 1: 34.5-kV collector circuits would be located within the boundaries of the facility, with proposed changes, and do not have specific rights-of-way defined for each circuit.					
Note 2: Underground cable configuration such that all electric fields are shielded within the cable and are not externally detectable.					
Source: WRWAMD4Doc14-26 RFA4 Complete RFA4 Exhibit AA. EMF Final, Tables AA-3 and AA-4. 2019-07-01.					

As represented in Table 7, the strength of the electric field would peak under the conductors at less than 0.4 kV/m for either above ground configuration which would not exceed 9 kV/m at 1 meter above the ground surface, as required by OAR 345-024-0090(1). There would be no measurable electric field associated with the underground collector lines. Table 7 includes information related to the anticipated modeled level of magnetic field that is anticipated to be produced by the 34.5 kV lines. The Council does not have a standard for magnetic field levels; however, OAR 345-021-0010(1)(aa)(A)(iv) requires information related to the magnetic field levels. This is included here for informational purposes.

The certificate holder also must comply with the requirements outlined in Siting Standard Condition 1(CON-TL-01), discussed below, and Siting Standard Condition 2(PRE-TL-01) and Siting Standard Condition 3 (OPR-TL-01) which require reporting, updating and documentation to the Oregon Public Utility Commission.

Based upon review the analysis in RFA4 Exhibit AA and compliance with existing site certificate conditions, the Council finds that the configurations of the aboveground segments of the 34.5-kV collector lines would not exceed 9 kV per meter at one meter above ground level.

#### *Induced Voltage and Current*

The Siting Standards for Transmission Lines standard requires the Council to find that the certificate holder “can design, construct and operate the proposed transmission line so that induced currents resulting from the transmission line and related or supporting facilities will be as low as reasonably achievable.”

As explained in RFA4 Exhibit AA, the flow of electricity in a transmission line can induce a small electric charge, or voltage, in nearby conductive objects. An induced electric charge can flow, or become electric current, when a path to ground is presented. Induced current can be observed as a continuous flow of electricity or, under some circumstances as a sudden discharge, commonly known as a “nuisance shock.” Passing current through grounding wire minimizes the current that would otherwise flow through a person or animal that comes in contact with the object. Because the underground 34.5-kV cables would not create an electric field at the ground surface, they would not present an induced voltage risk. However, if a portion or the entire 34.5-kV collector line is installed aboveground, this could create an induced voltage risk.

1  
2 The certificate holder explains that when assessing the potential hazards and mitigation  
3 measures for to reduce induced voltage include the characteristics of nearby objects, and the  
4 degree and nature of grounding of those objects.<sup>82</sup> For instance, a linear object that is parallel  
5 to the transmission line would be more greatly affected than one that is perpendicular to the  
6 line, and an object passing quickly under the transmission line would be minimally affected  
7 compared to a stationary object. The most common example of a sudden discharge from a non-  
8 grounded, inductively charged object is when a vehicle, which is insulated from grounding by its  
9 tires, is parked under a transmission line for sufficient time to build up a charge. A person  
10 touching such a charged vehicle could become a conducting path for the current and can feel a  
11 momentary shock if the available electrical charge is sufficient. Shocks and induced currents can  
12 be reduced or eliminated by proper grounding of metallic objects near the transmission line,  
13 shielding them from the electric field, or positioning the transmission line farther from the  
14 objects.

15  
16 Siting Standard Condition 1(CON-TL-01) requires the certificate holder to implement a program  
17 that provides reasonable assurance that all fences, gates, cattle guards, trailers, irrigation  
18 systems, or other objects or structures of a permanent nature that could become inadvertently  
19 charged with electricity are grounded or bonded throughout the life of the lines. The 34.5 kV  
20 collector line proposed in RFA4 may be buried or installed aboveground. The Council notes that  
21 if the collector line is buried on private property or within an existing ROW, that it should be  
22 marked to avoid any safety dangers from future ground disturbing activities. Siting Standard  
23 Condition 1 (e.) requires the certificate holder to provide landowners a map of the  
24 underground and overhead transmission lines on their property as well as safety risks  
25 associated with the lines. The Council amends this condition to require that the certificate  
26 holder also include information about how buried connector lines will be demarcated after they  
27 are installed. The Council amends this condition so that copies of the information required in  
28 the condition be provided for the Department for its records. The recommended revisions to  
29 this condition are provided below.

30  
31 Additionally, in 2017, the Council renumbered the OAR references for the Council's mandatory  
32 and site-specific site certificate condition rules. Under OAR 345-025-0010, the Council may  
33 include site-specific conditions in the site certificate. The site-specific condition at OAR 345-  
34 025-0010(4) provides reference to the 2012 edition of the NESC and requires that conductive  
35 structures (such as gates and fences) be grounded or bonded. The Council acknowledges that  
36 the 2012 version of the NESC has already been updated, so to design, construct and operate  
37 the proposed facility in compliance with the most up-to-date NESC code (desired method for  
38 safety) may create a compliance issue with the site-specific condition as written in rule. The  
39 Council notes that the previously imposed Siting Standard Condition 1 (CON-TL-01) has the  
40 outdated rule reference and also recommends amending the condition to align the site-specific  
41 condition with the most current version of the NESC:

---

<sup>82</sup> WRWAMD4Doc14-26 RFA4 Complete RFA4 Exhibit AA. EMF Final, Section 6.0. 2019-07-01.

**Amended Siting Standard Condition 1:** 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:

- 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.
  - b. Constructing all aboveground 34.5-kV transmission lines with a minimum clearance of 25 feet from the ground.
  - c. Constructing all aboveground 230-kV transmission lines with a minimum clearance of 30 feet from the ground.
  - 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) ~~(OAR 345-027-0023(4))~~.
  - 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.
  - 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.
  - 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.
  - h. Designing and maintaining all transmission lines so that induced voltages during operation are as low as reasonably achievable.
  - i. Designing, constructing and operating ~~the all~~ transmission lines 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)). 2012 Edition of the National Electrical Safety Code approved on June 3, 2011 by the American National Standards Institute (OAR 345-027-0023(4)).
  - j. Implement a safety protocol to ensure adherence to NESC grounding requirements.
- [Final Order on ASC, Siting Standard Condition 1; AMD4]

Based upon review of the certificate holder's evaluation presented in RFA4 Exhibit AA and compliance with existing and amended site certificate conditions, the Council finds that the certificate holder can design, construct and operate the collector lines proposed in RFA4 so that induced currents and nuisance shocks would be as low as reasonably achievable.

1 **Conclusion of Law**

2  
3 For the reasons discussed above, and subject to compliance with the existing and amended site  
4 certificate conditions, the Council finds that the facility, with proposed changes, would not  
5 result in a significant adverse impact under OAR 345-024-0090 would comply with the Council's  
6 Siting Standards for Transmission Lines.  
7

8 **III.Q. Other Applicable Regulatory Requirements Under Council Jurisdiction**

9  
10 Under ORS 469.503(3) and under the Council's General Standard of Review (OAR 345-022-  
11 0000), the Council must determine whether the proposed facility complies with "all other  
12 Oregon statutes and administrative rules...as applicable to the issuance of a site certificate for  
13 the proposed facility." This section addresses the applicable Oregon statutes and administrative  
14 rules that are not otherwise addressed in Council standards, including noise control regulations,  
15 regulations for removal or fill of material affecting waters of the state, and regulations for  
16 appropriating ground water.  
17

18 **III.Q.1. Noise Control Regulations: OAR 340-035-0035**

19  
20 *(1) Standards and Regulations:*

21 \*\*\*

22 *(b) New Noise Sources:*

23  
24 *(B) New Sources Located on Previously Unused Site:*

25  
26 *(i) No person owning or controlling a new industrial or commercial noise source*  
27 *located on a previously unused industrial or commercial site shall cause or*  
28 *permit the operation of that noise source if the noise levels generated or*  
29 *indirectly caused by that noise source increase the ambient statistical noise*  
30 *levels, L10 or L50, by more than 10 dBA in any one hour, or exceed the levels*  
31 *specified in Table 8, as measured at an appropriate measurement point, as*  
32 *specified in subsection (3)(b) of this rule, except as specified in subparagraph*  
33 *(1)(b)(B)(iii).*

34  
35 *(ii) The ambient statistical noise level of a new industrial or commercial noise*  
36 *source on a previously unused industrial or commercial site shall include all*  
37 *noises generated or indirectly caused by or attributable to that source including*  
38 *all of its related activities. Sources exempted from the requirements of section*  
39 *(1) of this rule, which are identified in subsections (5)(b) - (f), (j), and (k) of this*  
40 *rule, shall not be excluded from this ambient measurement.*

41  
42 *(iii) For noise levels generated or caused by a wind energy facility:*  
43

- 1                   (I) *The increase in ambient statistical noise levels is based on an assumed*  
2                   *background L50 ambient noise level of 26 dBA or the actual ambient*  
3                   *background level. The person owning the wind energy facility may*  
4                   *conduct measurements to determine the actual ambient L10 and L50*  
5                   *background level.*
- 6                   (II) *The "actual ambient background level" is the measured noise level at the*  
7                   *appropriate measurement point as specified in subsection (3)(b) of this*  
8                   *rule using generally accepted noise engineering measurement practices.*  
9                   *Background noise measurements shall be obtained at the appropriate*  
10                  *measurement point, synchronized with windspeed measurements of hub*  
11                  *height conditions at the nearest wind turbine location. "Actual ambient*  
12                  *background level" does not include noise generated or caused by the wind*  
13                  *energy facility.*
- 14                  (III) *The noise levels from a wind energy facility may increase the ambient*  
15                  *statistical noise levels L10 and L50 by more than 10 dBA (but not above*  
16                  *the limits specified in Table 8), if the person who owns the noise sensitive*  
17                  *property executes a legally effective easement or real covenant that*  
18                  *benefits the property on which the wind energy facility is located. The*  
19                  *easement or covenant must authorize the wind energy facility to increase*  
20                  *the ambient statistical noise levels, L10 or L50 on the sensitive property by*  
21                  *more than 10 dBA at the appropriate measurement point.*
- 22                  (IV) *For purposes of determining whether a proposed wind energy facility*  
23                  *would satisfy the ambient noise standard where a landowner has not*  
24                  *waived the standard, noise levels at the appropriate measurement point*  
25                  *are predicted assuming that all of the proposed wind facility's turbines*  
26                  *are operating between cut-in speed and the wind speed corresponding to*  
27                  *the maximum sound power level established by IEC 61400-11 (version*  
28                  *2002-12). These predictions must be compared to the highest of either the*  
29                  *assumed ambient noise level of 26 dBA or to the actual ambient*  
30                  *background L10 and L50 noise level, if measured. The facility complies*  
31                  *with the noise ambient background standard if this comparison shows*  
32                  *that the increase in noise is not more than 10 dBA over this entire range*  
33                  *of wind speeds.*
- 34                  (V) *For purposes of determining whether an operating wind energy facility*  
35                  *complies with the ambient noise standard where a landowner has not*  
36                  *waived the standard, noise levels at the appropriate measurement point*  
37                  *are measured when the facility's nearest wind turbine is operating over*  
38                  *the entire range of wind speeds between cut-in speed and the windspeed*  
39                  *corresponding to the maximum sound power level and no turbine that*  
40                  *could contribute to the noise level is disabled. The facility complies with*  
41                  *the noise ambient background standard if the increase in noise over*  
42                  *either the assumed ambient noise level of 26 dBA or to the actual ambient*

*background L10 and L50 noise level, if measured, is not more than 10 dBA over this entire range of wind speeds.*

*(VI) For purposes of determining whether a proposed wind energy facility would satisfy the Table 8 standards, noise levels at the appropriate measurement point are predicted by using the turbine's maximum sound power level following procedures established by IEC 61400-11 (version 2002-12), and assuming that all of the proposed wind facility's turbines are operating at the maximum sound power level.*

*(VII) For purposes of determining whether an operating wind energy facility satisfies the Table 8 standards, noise generated by the energy facility is measured at the appropriate measurement point when the facility's nearest wind turbine is operating at the windspeed corresponding to the maximum sound power level and no turbine that could contribute to the noise level is disabled.*

\*\*\*

### **Findings of Fact**

The Department of Environmental Quality (DEQ) noise control regulations at OAR 340-035-0035 have been adopted by Council as the compliance requirements for EFSC-jurisdiction energy facilities.

The noise impact analysis area includes the area within and extending 1-mile from the proposed amended site boundary.

### ***Noise Standards***

The DEQ noise rules set noise limits for new industrial or commercial noise sources based upon whether those sources would be developed on a previously used or unused industrial or commercial site. Pursuant to OAR 340-035-0015(47), a "previously unused industrial or commercial site" is defined as property which has not been used by any industrial or commercial noise source during the 20 years immediately preceding commencement of construction of a new industrial or commercial source on that property. There is no evidence in the record that the facility site has been in industrial or commercial use at any time during the last 20 years, therefore the site is considered a previously unused site and evaluated per the requirements of OAR 340-035-0035(1)(b)(B).

The requirements of OAR 340-035-0035(1)(b)(B)(ii), as provided above, apply to noise levels of new industrial or commercial noise sources on previously unused industrial or commercial sites; the requirements of OAR 340-035-0035(1)(b)(B)(iii) apply to noise levels generated by a "wind energy facility."<sup>83</sup> The facility, as approved, would include a 500 MW facility with up to 292 wind turbines. Because the facility has not yet been constructed, the operational noise analysis of

---

<sup>83</sup> OAR 340-035-0035(1)(b)(A).



proposed RFA4 facility components is evaluated with previously approved facility noise sources to evaluate total facility operational noise impacts. Therefore, for this analysis of total facility operational noise impacts, the Council applies DEQ's noise rules for a wind energy facility, based on the facility as approved, rather than applying different DEQ requirements to the proposed RFA4 facility components.

Noise generated by a new industrial or commercial source located on a previously unused site must comply with two standards: the "ambient noise degradation standard" and the "maximum allowable noise standard." Under the ambient noise degradation standard, facility-generated noise must not increase the ambient hourly L10 or L50 noise levels at any noise sensitive property by more than 10 dBA. To demonstrate compliance with the ambient noise degradation standard, noise generated during facility operation must not cause the hourly L50 noise level at any noise-sensitive property to exceed 10 dBA above ambient or 10 dBA above an assumed ambient of 26 dBA as allowed for wind energy facilities. Under the maximum allowable noise standard at OAR 340-035-0035(1)(b)(B)(i), new industrial or commercial noise sources may not exceed the noise levels specified in the noise rules, as represented in Table 8: *Statistical Noise Limits for Industrial and Commercial Noise Sources* below.

**Table 8: Statistical Noise Limits for Industrial and Commercial Noise Sources**

Statistical Descriptor <sup>1</sup>	Maximum Permissible Hourly Statistical Noise Levels (dBA)	
	Daytime (7:00 AM - 10:00 PM)	Nighttime (10:00 PM - 7:00 AM)
L50	55	50
L10	60	55
L1	75	60
Notes: 1. The hourly L50, L10 and L1 noise levels are defined as the noise levels equaled or exceeded 50 percent, 10 percent, and 1 percent of the hour, respectively. Source: OAR 340-035-0035, Table 8		

### *Potential Noise Impacts*

Potential noise impacts from construction and operation of proposed RFA4 facility components are presented below.

#### *Construction*

OAR 340-035-0035(5)(g) specifically exempts noise caused by construction activities; however, an evaluation of construction-related noise is presented in accordance with OAR Chapter 345

Division 21 information requirements and to inform the construction-related noise analysis required under the Council's Protected Areas and Recreation standards.

As evaluated in the RFA4 Exhibit X, construction of proposed RFA4 facility components would include site preparation, grading, preparation of staging areas and onsite access routes; array foundation installation, conductor installation, and construction of control building within Wheatridge West collector substation; solar panel assembly and construction electrical components; inverter pad construction; and, commissioning of solar array and grid interconnection. As presented in RFA4 Exhibit X Table X-3, typical construction equipment and predicted sound pressure levels at specific distances would include but is not limited to: forklift (80 dBA at 50 ft), backhoe (80 dBA at 50 ft), crane (85 dBA at 50 ft), and grader (85 dBA at 50 ft). Council previously imposed Noise Control Condition 1 (CON-NC-01) requiring that, during construction, combustion engine-powered equipment be equipped with exhaust mufflers; air-inlet silencers shrouds and shields be used, as appropriate; and requires that the certificate holder establish a noise complaint response system, including a system for the certificate holder to receive and resolve noise complaints. Construction activities associated with proposed RFA4 facility components would be required to comply with Noise Control Condition 1 (CON-NC-01).

### *Operations*

Operation of proposed RFA4 facility components would generate noise from transformers and inverters associated with the solar arrays, and inverters and cooling systems associated with battery storage systems. In RFA4, the certificate holder provides a noise analysis inclusive of the facility, as approved, and the operational sources and sound power levels (in A-weighted decibels) for proposed RFA4 facility components, as listed below:

- 41 inverters, each at 73 dBA
- 41 distribution transformers, each at 77 dBA
- 1 substation transformer at 98 dBA
- 81 heating, ventilation and air conditioning units, each at 85 dBA

For its analysis, the certificate holder used the Computer Aided Noise Abatement (CadnaA) software program, version 2018 MR1 to make the predictions of peak noise levels at noise-sensitive receptors within the analysis area. The program includes sound propagation factors adopted from International Organization for Standardization's (ISO) 9613-2 "Attenuation of Sound during Propagation Outdoors" to account for geometric divergence, atmospheric absorption, reflection from surfaces, screening by topography and obstacles, terrain complexity and ground effects, source directivity factors, seasonal foliage effects, and meteorological conditions. Topographical information was imported into the acoustic model using the official

U.S. Geological Survey (USGS) digital elevation dataset to accurately represent terrain in three dimensions. Terrain conditions, vegetation type, ground cover, and the density and height of foliage can also influence the absorption that takes place when sound waves travel over land.

CadnaA utilizes conservative assumptions as summarized below:

- The ISO 9613-2 standard assumes downwind propagation in all directions; in other words, receptors are assumed to be downwind of noise sources regardless of actual wind conditions. It is well understood that sound travels further downwind than upwind; therefore, the ISO 9613-2 standard assumption of downwind propagation in all directions would result in an overestimation of received sound levels at receptors that are not located downwind.
- All noise generating equipment are operating concurrently at maximum rated power, which is a very unlikely operational condition.
- Meteorological conditions favorable to sound propagation were selected: 10°C and 70% relative humidity.
- A semi-reflective ground absorption coefficient ( $G=0.5$ ) was used throughout the facility area, with an increasingly more reflective ground absorption coefficient used approaching each turbine location.
- Shielding effects from existing vegetation and anthropogenic structures is ignored.

Results of the noise analysis are presented graphically on noise contour maps identifying facility component locations, as approved and those proposed in RFA4, and noise sensitive receptors within 1-mile of the proposed amended site boundary, identifying the boundaries of 36 and 50 dBA noise contours. Noise contours are presented in RFA4 Exhibit X Figure X-1.

#### *Ambient Noise Degradation Standard*

The ambient noise degradation standard requires a demonstration that noise generated during facility operation must not cause the hourly L50 noise level at any noise-sensitive property to exceed 10 dBA above ambient or, in this case, 36 dBA. Based upon the certificate holder's noise analysis and noise contour maps, noise modeling results show that the ambient noise degradation standard would be exceeded at 9 noise sensitive receptor location, based solely on noise generated from proposed RFA4 facility components. Based on total facility noise impacts from the previously approved facility and with proposed RFA4 facility components, the ambient noise degradation standard would be exceeded at 16 noise sensitive receptors. The certificate holder asserts that these 16 noise sensitive receptors are all "participating property owners," meaning those landowners have signed a lease with the certificate holder and have indicated that they are willing to sign a noise waiver, if necessary. The noise modeling results also show that the facility, with proposed changes, would not exceed the maximum allowable decibel threshold of 50 dBA at any noise sensitive receptor within the analysis area.

Council previously imposed Noise Control Condition 2 (PRE-NC-01) requiring that, prior to construction, the certificate holder submit to the Department a noise assessment based on final facility design and layout, using the maximum sound power level for all noise-generating facility components and identifying the wind turbines that would be operated in Noise Reduction Operation (NRO) mode. The condition further requires that noise waivers necessary at noise sensitive receptor locations, where the ambient degradation noise level is exceeded, be secured and provided to the Department. In addition, Council previously imposed Noise Control Condition 3 (OPR-NC-01), Noise Control Condition 5 (OPR-NC-02), and Noise Control Condition 5 (OPR-NC-03) requiring that, during operations, the certificate holder operate wind turbines in NRO mode; maintain a complaint response system to address noise compliances; and, if required by Council, monitor and record statistical noise levels to verify that operational noise from the facility complies with the noise control regulation, respectively. The previously imposed conditions would continue to apply to proposed RFA4 facility components. The Council finds that the operation of the facility, with proposed changes, subject to the existing site certificate conditions, would continue to comply with the Noise Control Regulations in OAR 340-0035(1)(b)(B).

### *Corona Effect*

The corona effect (corona) is audible noise that emits from transmission lines caused from the partial electrical breakdown of the insulating properties of air around the conductors of a transmission line. Heat and energy are dissipated in a small volume near the surface of the conductors, part of this energy is in the form of small local pressure changes that result in audible noise. Corona-generated audible noise is characterized by a low hum, hissing, frying, or crackling sound. Corona is a function of transmission line voltage, altitude, conductor diameter, condition of the conductor, suspension hardware and specific damp weather conditions. In RFA4 Exhibit AA, the certificate holder affirms that lower voltage 34.5 kV collector lines associated with the electrical collection system have much lower electric field strength and would not exhibit corona activity or generate electromagnetic interference.

### **Conclusions of Law**

Based on the recommended foregoing findings, the Council finds that based upon compliance with existing conditions the facility, with proposed changes, would continue to comply with the Noise Control Regulations in OAR 340-035-0035(1)(b)(B).

### **III.Q.2. Removal-Fill**

The Oregon Removal-Fill Law (ORS 196.795 through 196.990) and Department of State Lands (DSL) regulations (OAR 141-085-0500 through 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.”<sup>84</sup>

---

<sup>84</sup> ORS 196.800(15) defines “Waters of this state.” The term includes wetlands and certain other waterbodies.

1 The Council, in consultation with the Oregon Department of State Lands (DSL), must determine  
2 whether a removal-fill permit is needed and if so, whether a removal-fill permit should be  
3 issued.

4  
5 The analysis area for potential impacts to wetlands and other waters of the state (WOS), as  
6 defined in the Project Order, is the area within the site boundary. Because RFA4 proposes to  
7 expand the site boundary, and because the area within the approved site boundary was  
8 previously evaluated by the certificate holder and DSL, the evaluation of potential impacts  
9 focuses on the new site boundary area to be occupied by proposed RFA4 facility components.

#### 10 11 **Findings of Fact**

12  
13 Potential locations of wetlands and WOS located within the proposed new site boundary area  
14 were delineated through a literature review and field investigations. The literature review of  
15 potentially jurisdictional wetlands and WOS included an evaluation of multiple existing data  
16 sources including the Natural Resource Conservation Service's (NRCS) 2018 National  
17 Hydrography Dataset and Web Soil Survey, U.S. Fish and Wildlife Service's 2018 National  
18 Wetlands Inventory, NRCS's 2018 Web Soil Survey, and 2016 Aerial Photography from U.S.  
19 Department of Agriculture's Farm Service Agency. Based on the literature review, there were  
20 no wetlands, hydric soils or perennial streams identified within the proposed new site boundary  
21 area.

22  
23 The certificate holder's consultant, Tetra Tech, conducted pedestrian-level field investigations  
24 with the proposed new site boundary area on August 22-23, 2018 and November 9, 2018.  
25 Pedestrian level-field investigations were conducted in accordance with methodology provided  
26 by the 1987 U.S. Army Corps of Engineers (USACE) *Wetlands Delineation Manual* as well as the  
27 USACE *Arid West Regional Supplement*; and, OAR 141-090, Administrative Rules for Wetland  
28 Delineation Report Requirements and for Jurisdictional Determinations for the Purpose of  
29 Regulating Fill and Removal within Waters of the State; 1979 Classification of Wetlands and  
30 Deepwater Habitats of the United States; and, 2015 Streamflow Duration Assessment Method  
31 for the Pacific Northwest.

32  
33 As presented in RFA4 Exhibit J (Section 3.4.2 Results), there were no wetlands or jurisdictional  
34 waters identified within the proposed new site boundary area. Field surveys identified seven  
35 ephemeral streams and one roadside drainage ditch, none of which would qualify as a  
36 jurisdictional water. On April 18, 2019, DSL issued a letter concurring with the wetland and  
37 waterway boundaries mapped by the certificate letter.<sup>85</sup> As noted in DSL's letter, the ephemeral  
38 waterways and roadside ditch are not jurisdictional waters per OAR 141- 085-0515(3) and (10).  
39 The concurrence letter is valid through April 18, 2024. Based on the certificate holder's  
40 evaluation and DSL's concurrence that jurisdictional waters were not present within the  
41 proposed new site boundary area, the Council finds that construction and operation of

---

<sup>85</sup> WRWAMD4 pRFA Wetland Delineation DSL Concurrence 2019-04-18.

proposed RFA4 facility components would not result in potential impacts to jurisdictional wetlands and WOS; and, would not require a removal-fill permit.

#### **Conclusions of Law**

Based on the foregoing recommended findings of fact and conclusions, the Council finds that a removal-fill permit is not needed for proposed RFA4 facility components.

#### **III.Q.3. Water Rights**

Under ORS Chapters 537 and 540 and OAR Chapter 690, the Oregon Water Resources Department (OWRD) administers water rights for appropriation and use of the water resources of the state. Under OAR 345-022-0000(1)(b), the Council must determine whether the proposed RFA4 facility components would comply with these statutes and administrative rules. OAR 345-021-0010(1)(o)(F) requires that if a facility, or proposed facility modification necessitates a groundwater permit, surface water permit, or water right transfer, that a decision on authorizing such a permit rests with the Council.

#### **Findings of Fact**

OAR 690 establishes the procedures and standards which shall be applied by the OWRD in the evaluation of applications for a permit to appropriate surface water, ground water, to construct a reservoir and store water, to use reserved water, or to use water stored in a reservoir.

As explained in RFA4 Exhibit O, construction of proposed RFA4 facility components would result in use of approximately 36.3 million gallons over an approximately 12-month period for dust suppression, concrete mixing (solar module and transformer pad foundations), and road construction (grading and compaction). The certificate holder estimates that monthly and daily water demand would result in 3 million gallons and 116, 647 gallons, respectively. If construction of proposed RFA4 facility components overlap with construction of previously approved wind facility components, the certificate holder estimates that construction related water use could result in 92.8 million gallons over a 12-month period, or 7.7 million gallons per month. During operation of proposed RFA4 facility components, water use could include solar panel washing, estimated at 325,125 gallons per wash.

The certificate holder intends to obtain water necessary for construction and operation of proposed RFA4 facility components from municipal sources and confirms that no groundwater permit, surface water permit or water right transfer is requested as part RFA4. In 2018, the certificate holder contacted Hermiston Public Works, Stanfield Public Works, Boardman Public Works, and Port of Morrow to confirm adequacy of water availability to meet the water needs of the amendment request. Based on confirmation documented in RFA4 Exhibit O, the identified municipal sources maintain sufficient availability of water to meet forecasted demand of proposed RFA4.

1  
2 In RFA4 Exhibit E, the certificate holder identifies that a limited water use license may be  
3 obtained for construction-related purposes, but that such permit is not expected and that if it  
4 was obtained, it would be obtained by a third-party permit. As presented in Section III.B.  
5 *Organizational Expertise* of this order, recommended amended Organizational Expertise  
6 Condition 8 (PRE-OE-06) would ensure that the certificate holder provide copies of third-party  
7 permits to the Department to demonstrate that access to the resource has been secured and  
8 that the certificate holder has an agreement with the third-party entity for access to the  
9 resource. If a limited water use license is requested by the certificate holder itself, it must be  
10 reviewed and processed via a site certificate amendment.

11  
12 Based on the findings presented here, the Council finds that a groundwater permit, surface  
13 water permit, or water right transfer is not requested or required for RFA4. If such a permit is  
14 required by the certificate holder at a later time, and not secured by a third-party entity, a site  
15 certificate amendment would be required to review and consider such a permit application.

16  
17 **Conclusions of Law**

18  
19 Based on the foregoing recommended findings of fact, the Council concludes that proposed  
20 RFA4 facility components would not need a groundwater permit, surface water permit, or  
21 water right transfer.  
22

**IV. CONCLUSIONS AND ORDER**

Based on the findings and conclusions included in this order, the Council makes the following findings:

1. The facility modifications included in Request for Amendment 4 of the Wheatridge Wind Energy Facility site certificate complies with the requirements of the Oregon Energy Facility Siting Statutes, ORS 469.300 to 469.520.
2. The facility modifications included in Request for Amendment 4 of the Wheatridge Wind Energy Facility site certificate complies with the standards adopted by the Council pursuant to ORS 469.501.
3. The facility modifications included in Request for Amendment 4 of the Wheatridge Wind Energy Facility site certificate complies with all other Oregon statutes and administrative rules identified in the project order as applicable to the issuance of a site certificate for the proposed facility.

Accordingly, the Council finds that the facility modifications included in Request for Amendment 4 of the Wheatridge Wind Energy Facility site certificate complies with the General Standard of Review (OAR 345-022-0000). The Council finds, based on a preponderance of the evidence on the record, that the site certificate may be amended as requested.

**Final Order**



The Council approves Amendment 4 of the Wheatridge Wind Energy Facility site certificate, subject to the terms and conditions included in the amended site certificate (Attachment A of this final order).

**Issued this 22<sup>nd</sup> day of November 2019**

**The ENERGY FACILITY SITING COUNCIL**

By:   
**Hanley Jenkins, II, Chair**  
**Energy Facility Siting Council**

**Attachments:**

- Attachment A: Amended Site Certificate
- Attachment B: Reviewing Agency Comments on preliminary Request for Amendment 4
- Attachment C: Draft Proposed Order Comment Index/Comments
- Attachment D: Draft Habitat Mitigation Plan
- Attachment E: Draft Amended Revegetation Plan
- Attachment F: Draft Noxious Weed Control Plan
- Attachment G: Wildlife Monitoring and Mitigation Plan

**Notice of the Right to Appeal**

The right to judicial review of this final order approving an amendment to the site certificate is governed by ORS 469.403 and OAR 345-027-0371(12). Pursuant to ORS 469.403(3), the Oregon Supreme Court has jurisdiction for review of the Council's approval of an application for an amended site certificate. To appeal you must file a petition for judicial review with the Supreme Court within 60 days from the day this final order approving an amendment to the site certificate was served.

If this order was e-mailed or mailed to you, the date of service is the date it was e-mailed or mailed, not the date you received it. The date of service for any persons to whom this final order was not e-mailed or mailed is the date it was posted to the Oregon Department of Energy Siting webpage. If you do not file a petition for judicial review within the applicable time period noted above, you lose your right to appeal.

**ENERGY FACILITY SITING COUNCIL  
OF THE  
STATE OF OREGON**

**Fourth Amended Site  
Certificate for the  
Wheatridge Wind Energy Facility**

**ISSUANCE DATES**

<b>Site Certificate</b>	<b>April 28, 2017</b>
<b>First Amended Site Certificate</b>	<b>July 27, 2017</b>
<b>Second Amended Site Certificate</b>	<b>November 16, 2018</b>
<b>Third Amended Site Certificate</b>	<b>December 14, 2018</b>
<b>Fourth Amended Site Certificate</b>	<b>November 22, 2019</b>

**THIS PAGE INTENTIONALLY LEFT BLANK**

## Table of Contents

<b>1.0</b>	<b>Introduction and Site Certification</b>	<b>1</b>
<b>2.0</b>	<b>Facility Location</b>	<b>3</b>
<b>2.1</b>	<b>Site Boundary</b>	<b>3</b>
<b>2.2</b>	<b>Micrositing Corridor</b>	<b>4</b>
<b>2.3</b>	<b>Intraconnection Transmission Line Corridor</b>	<b>4</b>
<b>3.0</b>	<b>Facility Description</b>	<b>5</b>
<b>3.1</b>	<b>Energy Facility</b>	<b>5</b>
<b>3.2</b>	<b>Related or Supporting Facilities</b>	<b>5</b>
<b>4.0</b>	<b>Site Certificate Conditions</b>	<b>13</b>
<b>4.1</b>	<b>Condition Format</b>	<b>13</b>
<b>4.2</b>	<b>General Conditions (GEN): Design, Construction and Operations</b>	<b>14</b>
<b>4.3</b>	<b>Pre-Construction (PRE) Conditions</b>	<b>23</b>
<b>4.4</b>	<b>Construction (CON) Conditions</b>	<b>39</b>
<b>4.5</b>	<b>Pre-Operational (PRO) Conditions</b>	<b>46</b>
<b>4.6</b>	<b>Operational (OPR) Conditions</b>	<b>48</b>
<b>4.7</b>	<b>Retirement Conditions (RET)</b>	<b>54</b>
<b>5.0</b>	<b>Successors and Assigns</b>	<b>55</b>
<b>6.0</b>	<b>Severability and Construction</b>	<b>55</b>
<b>7.0</b>	<b>Execution</b>	<b>56</b>

# WHEATRIDGE WIND ENERGY FACILITY SITE CERTIFICATE

## **Attachments**

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 Statute (ORS) Chapter 469, the Council issues this site certificate authorizing certificate holder to construct, operate and retire the Wheatridge Wind Energy Facility (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 4* (2) *Final Order on Request for Amendment 2*; (3) *Final Order on Request for Amendment 3*; (4) *Final Order on Request for Amendment 1*; (5) *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 supporting facilities are located within Morrow and Umatilla counties. The site boundary, as defined in OAR 345-001-0010, encompasses approximately 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 micro-siting corridors proposed by the certificate holder, as approved by the Council.<sup>1</sup>

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 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**

<b>Township</b>	<b>Range</b>	<b>Section(s)</b>
<b>Wheatridge East</b>		
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
<b>Wheatridge West</b>		
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
<b>Intraconnection Corridor</b>		
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

---

<sup>1</sup> 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 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 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 wind turbines with a total generating capacity up to 500 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 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 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 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 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 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 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 microsite 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 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 micro-siting 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 stated 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 micro-siting 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 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.)<sup>2</sup>. 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.

---

<sup>2</sup> 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
<b>STANDARD: GENERAL STANDARD OF REVIEW (GS) [OAR 345-022-0000]</b>	
GEN-GS-01	<p>The certificate holder shall:</p> <ol style="list-style-type: none"> <li>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.</li> <li>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.</li> </ol> <p>[Final Order on ASC, General Standard Condition 1; AMD2; AMD4] [Mandatory Condition OAR 345-025-0006(4)]</p>
GEN-GS-02	<p>The certificate holder shall:</p> <ol style="list-style-type: none"> <li>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.</li> <li>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.</li> </ol> <p>[Final Order on ASC, General Standard Condition 2; AMD2; AMD4] [Mandatory Condition OAR 345-025-0006(4)]</p>
GEN-GS-03	<p>The certificate holder shall design, construct, operate, and retire the facility:</p> <ol style="list-style-type: none"> <li>Substantially as described in the site certificate;</li> <li>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</li> <li>In compliance with all applicable permit requirements of other state agencies.</li> </ol> <p>[Final Order on ASC, Mandatory Condition 2] [OAR 345-025-0006(3)]</p>
GEN-GS-04	<p>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:</p>

	<ul style="list-style-type: none"> <li>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</li> <li>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.</li> </ul> <p>[Final Order on ASC, Mandatory Condition 3] [OAR 345-025-0006 (5)]</p>
GEN-GS-05	<p>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.</p> <p>[Final Order on ASC, Mandatory Condition 6] [OAR 345-025-0000(6)]</p>
GEN-GS-06	<p>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.</p> <p>[Final Order on ASC, Mandatory Condition 5] [OAR 345-025-0006(10)]</p>

GEN-GS-07	<p>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.</p> <p>[Final Order on ASC, Mandatory Condition 6] [OAR 345--025-0006(11)]</p>
GEN-GS-08	<p>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.</p> <p>[Final Order on ASC, Mandatory Condition 7] [OAR 345-025-0006(12)]</p>
GEN-GS-09	<p>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.</p> <p>[Final Order on ASC, Mandatory Condition 8] [OAR 345-025-0006 (13)]</p>
GEN-GS-10	<p>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.</p> <p>[Final Order on ASC, Mandatory Condition 9] [OAR 345-025-0006 (14)]</p>
GEN-GS-11	<p>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.</p> <p>[Final Order on ASC, Mandatory Condition 10] [OAR 345--025-0006 (15)]</p>
GEN-GS-12	<p>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.</p> <p>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.</p> <p>[Final Order on ASC, Site Specific Condition 1] [OAR 345-025-0010(5)]</p>
<b>STANDARD: ORGANIZATIONAL EXPERTISE (OE) [OAR 345-022-0010]</b>	
GEN-OE-01	<p>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.</p>

	[Final Order on ASC, Organizational Expertise Condition 5]
GEN-OE-02	<p>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.</p> <p>[Final Order on ASC, Organizational Expertise Condition 6]</p>
GEN-OE-03	<p>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.</p> <p>[Amendment #1 , Organizational Expertise Condition 9]</p>
GEN-OE-04	<p>The certificate holder shall:</p> <ol style="list-style-type: none"> <li>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.</li> <li>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.</li> </ol> <p>[Final Order on AMD2, Organizational Expertise Condition 10]</p>
<b>STANDARD: STRUCTURAL (SS) [OAR 345-022-0020]</b>	
GEN-SS-01	<p>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.</p> <p>[Final Order on ASC, Structural Standard Condition 2]</p>

**STANDARD: LAND USE (LU) [OAR 345-022-0030]**

GEN-LU-01	<p>The certificate holder shall design the facility to comply with the following setback distances in Morrow County:</p> <ul style="list-style-type: none"><li>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.</li><li>b. Wind turbines shall be setback 100 feet from all property boundaries, including participant property boundaries within the site boundary, if practicable.</li><li>c. Wind turbine foundations shall not be located on any property boundary, including participant property boundaries within the site boundary.</li><li>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.</li><li>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></li><li>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></li><li>g. <u>North side of perimeter fenceline of solar facility components shall be setback a minimum of 25 feet.</u></li></ul> <p>[Final Order on ASC; AMD3 Land Use Condition 1; AMD4]</p>
GEN-LU-02	<p>During design and construction of the facility, the certificate holder shall:</p> <ul style="list-style-type: none"><li>a. Obtain an access permit for changes in access on Morrow County roads; and</li><li>b. Improve or develop private access roads impacting intersections with Morrow County roads in compliance with Morrow County access standards.</li></ul> <p>[Final Order on ASC, Land Use Condition 4]</p>
GEN-LU-03	<p>During design and construction, the certificate holder shall implement the following actions on all meteorological towers approved through the site certificate:</p> <ul style="list-style-type: none"><li>a. Paint the towers in alternating bands of white and red or aviation orange; or</li><li>b. Install aviation lighting as recommended by the Federal Aviation Administration.</li></ul> <p>[Final Order on ASC, Land Use Condition 9]</p>
GEN-LU-04	<p>The certificate holder shall design and construct the facility using the minimum land area necessary for safe construction and operation. The certificate holder shall:</p> <ul style="list-style-type: none"><li>a. Locate access roads and temporary construction laydown and staging areas to minimize disturbance of farming practices;</li><li>b. Place turbines and transmission intraconnection lines along the margins of cultivated areas to reduce the potential for conflict with farm operations, where feasible.</li><li>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.</li><li>d. Bury underground communication and electrical lines within the area disturbed by temporary road widening, where possible.</li></ul>



	[Final Order on ASC, Land Use Condition 11; AMD4]
GEN-LU-05	<p>During design and construction of the facility, the certificate holder shall ensure that fencing and landscaping selected and used for the O&amp;M building and similar facility components sited within Morrow County blend with the nature of the surrounding area.</p> <p>[Final Order on ASC, Land Use Condition 14]</p>
GEN-LU-06	<p>During micrositing of the facility, the certificate holder shall ensure that wind turbines are sited based on a minimum setback of:</p> <ol style="list-style-type: none"> <li>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.</li> <li>2 miles from turbine towers to a city urban growth boundary.</li> <li>1 mile from turbine towers to land within Umatilla County lands zoned Unincorporated Community.</li> <li>2 miles from turbine towers to rural residences within Umatilla County.</li> <li>164 feet (50 meters) from tower and facility components to known archeological, historical and cultural sites or CTUIR cultural site.</li> </ol> <p>[Final Order on ASC;AMD3 Land Use Condition 16;]</p>
GEN-LU-07	<p>During design and construction, the certificate holder must ensure that the O&amp;M building in Umatilla County is consistent with the character of similar agricultural buildings used by commercial farmers or ranchers in Umatilla County.</p> <p>[Final Order on ASC, Land Use Condition 20]</p>

GEN-LU-08	<p>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.</p> <p>[Final Order on ASC, Land Use Condition 22]</p>
GEN-LU-09	<p>Before beginning electrical production, the certificate holder shall provide the location of each turbine tower, electrical collecting lines, the O&amp;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.</p> <p>[Final Order on ASC, Land Use Condition 24]</p>
GEN-LU-10	<p>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.</p> <p>[Final Order on ASC, Land Use Condition 28]</p>
<b>STANDARD: RETIREMENT AND FINANCIAL ASSURANCE (RT) [OAR 345-022-0050]</b>	
GEN-RF-01	<p>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.</p> <p>[Final Order on ASC, Retirement and Financial Assurance Condition 1] [Mandatory Condition OAR 345-025-0006(7)]</p>
<b>STANDARD: FISH AND WILDLIFE HABITAT (FW) [OAR 345-022-0060]</b>	
GEN-FW-01	<p>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.</p> <p>[Final Order on ASC, Fish and Wildlife Habitat Condition 2]</p>
GEN-FW-02	<p>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.</p> <p>[Final Order on ASC, Fish and Wildlife Habitat Condition 6]</p>
<b>STANDARD: SCENIC RESOURCES (SR) [OAR 345-022-0080]</b>	
GEN-SR-01	<p>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:</p> <ul style="list-style-type: none"> <li>a. Outdoor night lighting at the collector substations, Operations and Maintenance Buildings, and battery storage systems, must be <ul style="list-style-type: none"> <li>i. The minimum number and intensity required for safety and security;</li> <li>ii. Directed downward and inward within the facility to minimize backscatter and offsite light trespass; and</li> <li>iii. Have motion sensors and switches to keep lights turned off when not needed.</li> </ul> </li> </ul> <p>[Final Order on ASC, Scenic Resources Condition 1, AMD2]</p>

GEN-SR-02	<p>The certificate holder shall:</p> <ol style="list-style-type: none"> <li>Design and construct the O&amp;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;</li> <li>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.</li> <li>Design and construct support towers for the intraconnection transmission lines using either wood or steel structures and utilize finish with a low reflectivity coating;</li> <li>Finish substation structures and battery storage systems utilizing neutral colors to blend with the surrounding landscape;</li> <li>Minimize use of lighting and design lighting to prevent offsite glare;</li> <li>Not display advertising or commercial signage on any part of the proposed facility;</li> <li>Limit vegetation clearing and ground disturbance to the minimum area necessary to safely and efficiently install the facility equipment;</li> <li>Water access roads and other areas of ground disturbance during construction, as needed, to avoid the generation of airborne dust; and</li> <li>Restore and revegetate temporary impact areas as soon as practicable following completion of construction.</li> </ol> <p>[Final Order on ASC, Scenic Resources Condition 2, AMD2]</p>
<b>STANDARD: PUBLIC SERVICES (PS) [OAR 345-022-0110]</b>	
GEN-PS-01	<p>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.</p> <p>[Final Order on ASC, Public Services Condition 5]</p>
GEN-PS-02	<p>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&amp;M buildings shall be fenced. The certificate holder shall keep tower access doors and O&amp;M buildings locked at all times, except when authorized personnel are present.</p> <p>[Final Order on ASC, Public Services Condition 11]</p>

GEN-PS-03	<p>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.</p> <p>[Final Order on ASC, Public Services Condition 18]</p>
GEN-PS-04	<p>The certificate holder shall design, construct and maintain the battery storage systems within a 100 foot vegetation free zone.</p> <p>[Final Order on AMD2, Public Services Condition 23]</p>
<b>STANDARD: PUBLIC HEALTH AND SAFETY FOR WIND FACILITIES (WF) [OAR 345-024-0010]</b>	
GEN-WF-01	<p>During construction and operation, the certificate holder shall follow manufacturers' recommended handling instructions and procedures to prevent damage to turbine or turbine tower components.</p> <p>[Final Order on ASC, Public Health and Safety Standards for Wind Facilities Condition 3]</p>
GEN-WF-02	<p>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.</p> <p>[Final Order on ASC, Public Health and Safety Standards for Wind Facilities Condition 5]</p>

### 4.3 Pre-Construction (PRE) Conditions

Condition Number	Pre-Construction (PRE) Conditions
<b>STANDARD: ORGANIZATIONAL EXPERTISE (OE) [OAR 345-022-0010]</b>	
PRE-OE-01	<p>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.</p> <p>[Final Order on ASC, Organizational Expertise Condition 1]</p>
PRE-OE-02	<p>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.</p> <p>[Final Order on ASC, Organizational Expertise Condition 2]</p>
PRE-OE-03	<p>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.</p> <p>[Final Order on ASC, Organizational Expertise Condition 3]</p>
PRE-OE-04	<p>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.</p> <p>[Final Order on ASC, Organizational Expertise Condition 4]</p>
PRE-OE-05	<p>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).</p> <p>[Final Order on ASC, Organizational Expertise Condition 7]</p>
PRE-OE-06	<p>The certificate holder must:</p> <ol style="list-style-type: none"> <li>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.</li> <li>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.</li> <li>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.</li> </ol>



**STANDARD: STRUCTURAL (SS) [OAR 345-022-0020]**

PRE-SS-01	<p>Before beginning construction, the certificate holder must:</p> <ol style="list-style-type: none"><li>Submit a protocol to the Department and Oregon Department of Geology &amp; 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.</li><li>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:<ul style="list-style-type: none"><li>Subsurface soil and geologic conditions of the site boundary</li><li>Define and delineate geological and geotechnical hazards, and means to mitigate these hazards</li><li>Geotechnical design criteria and data for the turbine foundations, foundations of substations, O&amp;M buildings, battery storage systems, roads, and other related and supporting facilities</li><li>Design data for installation of underground and overhead collector lines, and overhead transmission lines</li><li>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</li><li>Investigations of the swell and collapse potential of loess soils within the site boundary.</li></ul></li></ol> <p>[Final Order on ASC, Structural Standard Condition 1; AMD2]</p>
PRE-SS-02	<p>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.</p> <p>[Final Order on ASC, Structural Standard Condition 3]</p>
PRE-SS-03	<p>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.</p> <p>[Final Order on ASC, Structural Standard Condition 4]</p>
PRE-SS-04	<p>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.</p> <p>[Final Order on ASC, Structural Standard Condition 5]</p>
<b>STANDARD: SOIL PROTECTION (SP) [OAR 345-022-0022]</b>	
PRE-SP-01	<p>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</p>

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



PRE-SP-02	<p>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.</p> <p>[Final Order on ASC, Soil Protection Condition 4]</p>
PRE-SP-03	<p>Prior to beginning construction of the O&amp;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&amp;M buildings.</p> <p>[Final Order on ASC, Soil Protection Condition 7]</p>
<b>STANDARD: LAND USE (LU) [OAR 345-022-0030]</b>	
PRE-LU-01	<p>Before beginning construction, the certificate holder shall complete the following:</p> <ol style="list-style-type: none"> <li>Pay the requisite fee and obtain a Zoning Permit from Morrow County for all facility components sited in Morrow County; and</li> <li>Obtain all other necessary local permits, including building permits.</li> <li>Provide the county with a building permit application, a third party technical report which includes: <ol style="list-style-type: none"> <li>Evaluates fire hazards and;</li> <li>Presents mitigation and recommendations for a fire suppression system designed for the battery storage systems.</li> </ol> </li> <li>The certificate holder shall provide copies of the third-party technical report and issued permits to the Department.</li> </ol> <p>[Final Order on ASC, Land Use Condition 3; AMD2]</p>
PRE-LU-02	<p>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.</p> <p>[Final Order on ASC, Land Use Condition 5]</p>
PRE-LU-03	<p>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.</p> <p>[Final Order on ASC, Land Use Condition 6]</p>
PRE-LU-04	<p>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.</p> <p>[Final Order on ASC, Land Use Condition 7]</p>
PRE-LU-05	<p>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.</p> <p>[Final Order on ASC, Land Use Condition 12]</p>

PRE-LU-06	<p>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.</p> <p>[Final Order on ASC, Land Use Condition 13]</p>
PRE-LU-07	<p>Before beginning construction, the certificate holder must:</p> <ol style="list-style-type: none"> <li>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&amp;M building, and the intraconnection line.</li> <li>Provide the Department and county with a building permit application that includes a third party technical report which: <ol style="list-style-type: none"> <li>Evaluates fire hazards, and</li> <li>Presents mitigation and recommendations for a fire suppression system designed for the battery storage systems.</li> </ol> </li> <li>The certificate holder shall provide copies of the third-party technical report and issued permits to the Department.</li> </ol> <p>[Final Order on ASC, Land Use Condition 15; AMD2]</p>
PRE-LU-08	<p>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.</p> <p>[Final Order on ASC, Land Use Condition 18; AMD4]</p>
PRE-LU-09	<p>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.</p> <p>[Final Order on ASC, Land Use Condition 21]</p>
<b>STANDARD: RETIREMENT AND FINANCIAL ASSURANCE (RT) [OAR 345-022-0050]</b>	
PRE-RF-01	<p>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.</p> <p>[Final Order on ASC, Retirement and Financial Assurance Condition 4]</p> <p>[Mandatory Condition OAR 345-025-0006(8)]</p>

PRE-RF-02	<p>Before beginning construction of the:</p> <ol style="list-style-type: none"> <li>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 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:</li> <li>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: <ol style="list-style-type: none"> <li>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.</li> <li>2. The certificate holder shall adjust the amount of the bond or letter of credit using the following calculation: <ol style="list-style-type: none"> <li>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.</li> <li>ii. Round the result total to the nearest \$1,000 to determine the financial assurance amount.</li> </ol> </li> <li>3. The certificate holder shall use an issuer of the bond or letter of credit approved by the Council.</li> <li>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.</li> </ol> </li> </ol> <p>[Final Order on ASC, Retirement and Financial Assurance Condition 5; AMD2; AMD4]</p>
-----------	--

**STANDARD: FISH AND WILDLIFE HABITAT (FW) [OAR 345-022-0060]**

PRE-FW-01	<p>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.</p> <p>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 micro-siting 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.</p> <p>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.</p> <p>[Final Order on ASC, Fish and Wildlife Habitat Condition 1]</p>
PRE-FW-02	<p>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.</p> <ol style="list-style-type: none"><li>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.</li><li>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.</li></ol> <p>[Final Order on ASC, Fish and Wildlife Habitat Condition 4]</p>
PRE-FW-03	<p>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.</p> <p>[Final Order on ASC, Fish and Wildlife Habitat Condition 8]</p>

PRE-FW-04	<p>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.</p> <ol style="list-style-type: none"> <li>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.</li> <li>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.</li> <li>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.</li> <li>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.</li> <li>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: <ol style="list-style-type: none"> <li>i. Restoration and revegetation of temporary construction-related impact area shall be conducted as soon as possible following construction.</li> <li>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.</li> </ol> </li> <li>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.</li> <li>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.</li> <li>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.</li> </ol> <p>[Final Order on ASC, Fish and Wildlife Habitat Condition 10]</p>
PRE-FW-05	<p>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</p>

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.  
[Final Order on ASC, Fish and Wildlife Habitat Condition 11]

**STANDARD: THREATENED AND ENDANGERED SPECIES (TE) [OAR 345-022-0070]**

PRE-TE-01	<p>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.</p> <p>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.</p> <p>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.</p> <p>[Final Order on ASC, Threatened and Endangered Species Condition 1]</p>
PRE-TE-02	<p>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.</p> <p>[Final Order on ASC, Threatened and Endangered Species Condition 2]</p>
PRE-TE-03	<p>To avoid potential impacts to Laurent's milkvetch, the certificate holder must:</p> <ol style="list-style-type: none"> <li>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.</li> </ol>

ii.	Ensure that any plant protection zone established under (i) above is included on construction plans showing the final design locations.
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.
iv.	<p><u>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:</u></p> <ul style="list-style-type: none"> <li>• <u>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;</u></li> <li>• <u>A description of the individual(s) or population(s) identified within the survey area that would be avoided and impacted;</u></li> <li>• <u>An evaluation of facility impacts on the survival or recovery of the species, in accordance with the Threatened and Endangered Species standard;</u></li> <li>• <u>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.</u></li> <li>• <u>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.</u></li> </ul> <p>[Final Order on ASC; AMD3; Threatened and Endangered Species Condition 3; AMD4]</p>

**STANDARD: HISTORIC, CULTURAL, AND ARCHAEOLOGICAL RESOURCES (HC) [OAR 345-022-0090]**

PRE-HC-01	<p>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.</p> <p>[Final Order on ASC, Historic, Cultural, and Archeological Resources Condition 1]</p>
PRE-HC-02	<p>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.</p> <p>[Final Order on ASC, Historic, Cultural, and Archeological Resources Condition 2]</p>
PRE-HC-03	<p>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.</p>

**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.

In addition, the certificate holder shall include the following information in the plan:

- 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;
- b. A policy of including traffic control procedures in contract specifications for construction of the facility;
- 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;
- 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;
- e. A policy to encourage and promote carpooling for the construction workforce; and
- f. Procedures to keep state highways and county roads free of gravel that may be tracked out on intersecting roads at facility access points.

[Final Order on ASC, Public Services Condition 6]



PRE-PS-02	<p>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.</p> <p>[Final Order on ASC, Public Services Condition 7]</p>
PRE-PS-03	<p>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.</p> <p>[Final Order on ASC, Public Services Condition 8]</p>
PRE-PS-04	<p>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.</p> <p>[Final Order on ASC, Public Services Condition 9]</p>

PRE-PS-05	<p>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, Lone 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.</p> <p>Additional information that shall be included in the plan:</p> <ul style="list-style-type: none"> <li>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.</li> <li>b. Identification of agencies that participated in developing the plan;</li> <li>c. Identification of agencies that are designated as first response agencies or are included in any mutual aid agreements with the facility;</li> <li>d. A list of any other mutual aid agreements or fire protection associations in the vicinity of the facility;</li> <li>e. Contact information for each agency listed above;</li> <li>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;</li> <li>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;</li> <li>h. The designated meeting location in case of evacuation;</li> <li>i. Staff training requirements; and</li> </ul> <p>Copies of mutual aid, fire protection association, or other agreements entered into concerning fire protection at the facility site.</p> <p>[Final Order on ASC, Public Services Condition 13]</p>
PRE-PS-06	<p>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.</p> <p>[Final Order on ASC, Public Services Condition 20]</p>

PRE-PS-07	<p>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.</p> <p>[Final Order on ASC, Public Services Condition 21]</p>
<b>STANDARD: WASTE MINIMIZATION (WM,) [OAR 345-022-0120]</b>	
PRE-WM-01	<p>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:</p> <ol style="list-style-type: none"> <li>Specification of the number and types of waste containers to be maintained at construction sites and construction yards</li> <li>Description of waste segregation methods for recycling or disposal.</li> <li>Names and locations of appropriate recycling and waste disposal facilities, collection requirements, and hauling requirements to be used during construction.</li> </ol> <p>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).</p> <p>[Final Order on ASC, Waste Minimization Condition 2]</p>
PRE-WM-02	<p>Prior to construction, the certificate holder shall investigate and confirm that no surface 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.</p> <p>[Final Order on ASC, Waste Minimization Condition 3]</p>
<b>STANDARD: SITING STANDARDS FOR TRANSMISSION LINES (TL) [OAR 345-024-0090]</b>	
PRE-TL-01	<p>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.</p> <p>[Final Order on ASC, Siting Standard Condition 2]</p>

---

**STANDARD: NOISE CONTROL REGULATION (NC) [OAR 345-035-0035]**

---

PRE-NC-01

Prior to construction, the certificate holder shall provide to the department:

- a. Information that identifies the final design locations of all facility components to be built at the facility;
- 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;
- 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,
- 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.

[Final Order on ASC; AMD3; Noise Control Condition 2]

---

#### 4.4 Construction (CON) Conditions

Condition Number	Construction (CON) Conditions
<b>STANDARD: SOIL PROTECTION (SP) [OAR 345-022-0022]</b>	
CON-SP-01	<p>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.</p> <p>[Final Order on ASC, Soil Protection Condition 1]</p>
CON-SP-02	<p>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.</p> <p>[Final Order on ASC, Soil Protection Condition 2]</p>
<b>STANDARD: LAND USE (LU) [OAR 345-022-0030]</b>	
CON-LU-01	<p>During construction, the certificate holder shall comply with the following requirements:</p> <ol style="list-style-type: none"> <li>Construction vehicles shall use previously disturbed areas including existing roadways and tracks.</li> <li>Temporary construction yards and laydown areas shall be located within the future footprint of permanent structures to the extent practicable.</li> <li>New, permanent roadways will be the minimum width allowed while still being consistent with safe use and satisfying county road and safety standards.</li> <li>Underground communication and electrical lines will be buried within the area disturbed by temporary road widening to the extent practicable.</li> </ol> <p>[Final Order on ASC, Land Use Condition 8]</p>
CON-LU-02	<p>During construction, the certificate holder shall install smooth turbine tower structures and turbine nacelles that lack perching or nesting opportunities for birds.</p> <p>[Final Order on ASC, Land Use Condition 17]</p>
CON-LU-03	<p>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.</p> <p>[Final Order on ASC, Land Use Condition 19]</p>
<b>STANDARD: FISH AND WILDLIFE HABITAT (FW) [OAR 345-022-0060]</b>	
CON-FW-01	<p>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.</p> <p>[Final Order on ASC, Fish and Wildlife Habitat Condition 3; AMD4]</p>

CON-FW-02	<p>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.</p> <p>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.</p> <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> <p>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. [Final Order on ASC; AMD3 Fish and Wildlife Habitat Condition 5; AMD4]</p>	Sensitive Status Species	Buffer Size (Radius Around Nest Site):	Sensitive Nesting and Breeding Season :	Western burrowing owl	0.25 mile	April 1 to August 15	Ferruginous hawk	0.25 mile	March 15 to August 15	Swainson’s hawk	0.25 mile	April 1 to August 15
Sensitive Status Species	Buffer Size (Radius Around Nest Site):	Sensitive Nesting and Breeding Season :											
Western burrowing owl	0.25 mile	April 1 to August 15											
Ferruginous hawk	0.25 mile	March 15 to August 15											
Swainson’s hawk	0.25 mile	April 1 to August 15											
CON-FW-03	<p>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.</p> <p>[Final Order on ASC, Fish and Wildlife Habitat Condition 7]</p>												
CON-FW-04	<p>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.</p> <p>[Final Order on ASC, Fish and Wildlife Habitat Condition 9]</p>												
<b>STANDARD: HISTORIC, CULTURAL, AND ARCHAEOLOGICAL RESOURCES (HC) [OAR 345-022-0090]</b>													

CON-HC-01	<p>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, WR11-BB-IS-01, WR11-DM-04) are concurred not likely NRHP eligible through SHPO review; or, a Historic, Cultural, and Archeological 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.</p> <p>[Final Order on ASC, Historic, Cultural, and Archeological Resources Condition 3; AMD4]</p>
-----------	---

CON-HC-02	<p>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.</p> <p>[Final Order on ASC, Historic, Cultural, and Archeological Resources Condition 5]</p>
<b>STANDARD: PUBLIC SERVICES (PS) [OAR 345-022-0110]</b>	
CON-PS-01	<p>During construction, the certificate holder shall include the following additional measures in the construction waste management plan required by Waste Minimization Condition 2:</p> <ol style="list-style-type: none"> <li>Recycling steel and other metal scrap.</li> <li>Recycling wood waste.</li> <li>Recycling packaging wastes such as paper and cardboard.</li> <li>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.</li> <li>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.</li> <li>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.</li> </ol> <p>[Final Order on ASC, Public Services Condition 3]</p>
CON-PS-02	<p>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.</p> <p>[Final Order on ASC, Public Services Condition 10]</p>
CON-PS-03	<p>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.</p> <p>[Final Order on ASC, Public Services Condition 14]</p>
CON-PS-04	<p>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.</p> <p>[Final Order on ASC, Public Services Condition 16]</p>



CON-PS-05	<p>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.</p> <p>[Final Order on ASC, Public Services Condition 17]</p>
<b>STANDARD: WASTE MINIMIZATION (WM) [OAR 345-022-0120]</b>	
CON-WM-01	<p>During construction, the certificate holder shall require construction contractors to complete the following for any off-site disposal of excess soil during construction activities:</p> <ol style="list-style-type: none"> <li>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,</li> <li>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.</li> </ol> <p>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).</p> <p>[Final Order on ASC, Waste Minimization Condition 1]</p>
<b>STANDARD: PUBLIC HEALTH AND SAFETY FOR WIND FACILITIES (WF) [OAR 345-024-0010]</b>	
CON-WF-01	<p>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.</p> <p>[Final Order on ASC, Public Health and Safety Standards for Wind Facilities Condition 1]</p>
CON-WF-02	<p>Prior to and during operations the certificate holder shall:</p> <ol style="list-style-type: none"> <li>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.</li> <li>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.</li> <li>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.</li> <li>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.</li> <li>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.</li> </ol> <p>[Final Order on ASC;AMD3; Public Health and Safety Standards for Wind Facilities Condition 4]</p>

---

**STANDARD: SITING STANDARDS FOR TRANSMISSION LINES (TL) [OAR 345-024-0090]**

---

CON-TL-01	<p>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:</p> <ul style="list-style-type: none"><li>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.</li><li>b. Constructing all aboveground 34.5-kV transmission lines with a minimum clearance of 25 feet from the ground.</li><li>c. Constructing all aboveground 230-kV transmission lines with a minimum clearance of 30 feet from the ground.</li><li>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)).</li><li>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.</li><li>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.</li><li>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.</li><li>h. Designing and maintaining all transmission lines so that induced voltages during operation are as low as reasonably achievable.</li><li>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)).</li><li>j. Implement a safety protocol to ensure adherence to NESC grounding requirements</li></ul> <p>[Final Order on ASC, Siting Standard Condition 1; AMD4]</p>
-----------	--

---

---

**STANDARD: NOISE CONTROL REGULATION (NC) [OAR 345-035-0035]**

---

CON-NC-01

During construction, to reduce construction noise impacts at nearby residences, the certificate holder shall:

- a. Establish and enforce construction site and access road speed limits;
- b. Utilize electrically-powered equipment instead of pneumatic or internal combustion powered equipment, where feasible;
- c. Locate material stockpiles and mobile equipment staging, parking, and maintenance areas as far as practicable away from noise sensitive properties;
- d. Utilize noise-producing signals, including horns, whistles, alarms, and bells for safety warning purposes only;
- 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,
- 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.

[Final Order on ASC, Noise Control Condition 1]

---

## 4.5 Pre-Operational (PRO) Conditions

Condition Number	Pre-Operational (PRO) Conditions
<b>STANDARD: SOIL PROTECTION (SP) [OAR 345-022-0022]</b>	
PRO-SP-01	<p>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:</p> <ul style="list-style-type: none"> <li>• Procedures for oil and hazardous material emergency response consistent with OAR 340, Division 100-122 and 142</li> <li>• 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</li> <li>• Current inventory (type and quantity) of all hazardous materials stored onsite, specifying the amounts at each O&amp;M building, substation and battery storage system components</li> <li>• Restriction limiting onsite storage of diesel fuel or gasoline</li> <li>• Requirement to store lubricating and dielectric oils in quantities equal to or greater than 55-gallons in qualified oil-filled equipment</li> <li>• Preventative measures and procedures to avoid spills <ul style="list-style-type: none"> <li>○ Procedures for chemical storage</li> <li>○ Procedures for chemical transfer</li> <li>○ Procedures for chemical transportation</li> <li>○ Procedures for fueling and maintenance of equipment and vehicles</li> <li>○ Employee training and education</li> </ul> </li> <li>• Clean-up and response procedures, in case of an accidental spill or release</li> <li>• Proper storage procedures</li> <li>• Reporting procedures in case of an accidental spill or release</li> </ul> <p>[Final Order on ASC, Soil Protection Condition 5; AMD2]</p>
<b>STANDARD: PUBLIC SERVICES (PS) [OAR 345-022-0110]</b>	
PRO-PS-01	<p>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.</p> <p>[Final Order on ASC, Public Services Condition 15]</p>
PRO-PS-02	<p>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</p>

	holder shall provide an updated site plan if additional turbines or other structures are later added to the facility. [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. [Final Order on ASC, Public Services Condition 22]

#### 4.6 Operational (OPR) Conditions

Condition Number	Operational (OPR) Conditions
<b>STANDARD: GENERAL STANDARD OF REVIEW (GS) [OAR 345-022-0000]</b>	
OPR-GS-01	<p>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.</p> <p>[Final Order on ASC, Mandatory Condition 1] [OAR 345-025-0006(2)]</p>
<b>STANDARD: SOIL PROTECTION (SP) [OAR 345-022-0022]</b>	
OPR-SP-01	<p>During facility operation, the certificate holder shall:</p> <ol style="list-style-type: none"> <li>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.</li> <li>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&amp;M buildings to avoid unnecessary compaction, erosion, or spill risk to the area surrounding the facility.</li> <li>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.</li> </ol> <p>[Final Order on ASC, Soil Protection Condition 6]</p>
<b>STANDARD: LAND USE (LU) [OAR 345-022-0030]</b>	
OPR-LU-01	<p>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.</p> <p>[Final Order on ASC, Land Use Condition 2]</p>
OPR-LU-02	<p>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.</p> <p>[Final Order on ASC, Land Use Condition 10]</p>
OPR-LU-03	<p>Before beginning decommissioning activities, the certificate holder must provide a copy of the final retirement plan to Morrow County and Umatilla County.</p> <p>[Final Order on ASC, Land Use Condition 23]</p>
OPR-LU-04	<p>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.</p> <p>[Final Order on ASC, Land Use Condition 25]</p>

OPR-LU-05	<p>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.</p> <p>[Final Order on ASC, Land Use Condition 26]</p>
OPR-LU-06	<p>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:</p> <ol style="list-style-type: none"> <li>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.</li> <li>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.</li> <li>3. Remove gravel from areas surrounding turbine pads.</li> <li>4. Remove and restore private access roads unless the landowners directs otherwise.</li> <li>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.</li> <li>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.</li> <li>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.</li> </ol> <p>[Final Order on ASC, Land Use Condition 27]</p>
<b>STANDARD: RETIREMENT AND FINANCIAL ASSURANCE (RT) [OAR 345-022-0050]</b>	
OPR-RF-01	<p>During facility operation, the certificate holder shall:</p> <ol style="list-style-type: none"> <li>(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.</li> <li>(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.</li> </ol> <p>[Final Order on AMD2, Retirement and Financial Assurance Condition 6]</p>
<b>STANDARD: PUBLIC SERVICES (PS) [OAR 345-022-0110]</b>	
OPR-PS-01	<p>During operation of the facility, the certificate holder shall discharge sanitary wastewater generated at the O&amp;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.</p> <p>[Final Order on ASC, Public Services Condition 1]</p>
OPR-PS-02	<p>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&amp;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.</p>





OPR-PS-03	<p>(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:</p> <ol style="list-style-type: none"> <li>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.</li> <li>2. Training employees to handle, replace, and store damaged, defective or recalled lithium-ion batteries; minimize and recycle solid waste.</li> <li>3. Recycling paper products, metals, glass, and plastics.</li> <li>4. Recycling used oil and hydraulic fluid.</li> <li>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.</li> <li>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.</li> </ol> <p>(b) During operation, the certificate holder shall implement the approved Operational Waste Management Plan.</p> <p>[Final Order on ASC, Public Services Condition 4; AMD2]</p>
OPR-PS-04	<p>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.</p> <p>[Final Order on ASC, Public Services Condition 12]</p>
<b>STANDARD: PUBLIC HEALTH AND SAFETY FOR WIND FACILITIES (WF) [OAR 345-024-0010]</b>	
OPR-WF-01	<p>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.</p> <p>[Final Order on ASC, Public Health and Safety Standards for Wind Facilities Condition 2; AMD2]</p>

**STANDARD: SITING STANDARDS FOR TRANSMISSION LINES (TL) [OAR 345-024-0090]**

OPR-TL-01	<p>During operation, the certificate holder shall:</p> <ol style="list-style-type: none"><li>(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.</li><li>(2) File the following required information with the Commission:<ol style="list-style-type: none"><li>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:<ol style="list-style-type: none"><li>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</li><li>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.</li><li>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.</li><li>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]</li></ol></li></ol></li><li>(3) Provide OPUC Safety Staff with:<ol style="list-style-type: none"><li>a. Maps and Drawings of routes and installation of electrical supply lines showing:<ul style="list-style-type: none"><li>• Transmission lines and structures (over 50,000 Volts)</li><li>• Distribution lines and structures - differentiating underground and overhead lines (over 600 Volts to 50,000 Volts)</li><li>• Substations, roads and highways</li><li>• Plan and profile drawings of the transmission lines (and name and contact information of responsible professional engineer).</li></ul></li></ol></li></ol> <p>[Final Order on ASC, Siting Standard Condition 3]</p>
-----------	--

**STANDARD: NOISE CONTROL REGULATION (NC) [OAR 345-035-0035]**

OPR-NC-01	<p>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.</p> <p>[Final Order on ASC, Noise Control Condition 3]</p>
-----------	---

OPR-NC-02	<p>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.</p> <p>[Final Order on ASC, Noise Control Condition 4]</p>
OPR-NC-03	<p>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.</p> <p>[Final Order Noise Control Condition 5]</p>

#### 4.7 Retirement Conditions (RET)

Condition Number	Retirement (RET) Conditions
<b>STANDARD: RETIREMENT AND FINANCIAL ASSURANCE (RT) [OAR 345-022-0050]</b>	
RET-RF-01	<p>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.</p> <p>[Final Order Retirement and Financial Assurance Condition 2] [Mandatory Condition OAR 345-025-0006(9)]</p>
RET-RF-02	<p>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.</p> <p>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.</p> <p>[Final Order Retirement and Financial Assurance Condition 3] [Mandatory Condition OAR 345-025-0006(16)]</p>

## **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**

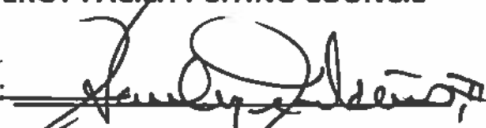
If any provision of this agreement and certificate is declared by a court to be illegal or in conflict with any law, the validity of the remaining terms and conditions shall not be affected, and the rights and obligations of the parties shall be construed and enforced as if the agreement and certificate 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: Nov. 22, 2019

**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 Site Boundary Maps  
(ASC Exhibit C, Figure C-2  
and RFA4)

Attachment A  
Wind Facility and Solar  
Facility Site Boundary Maps  
(ASC Exhibit C, Figure C-2  
and RFA~~42~~)



**Wheatridge  
Wind Energy Facility  
Request for Amendment 4**

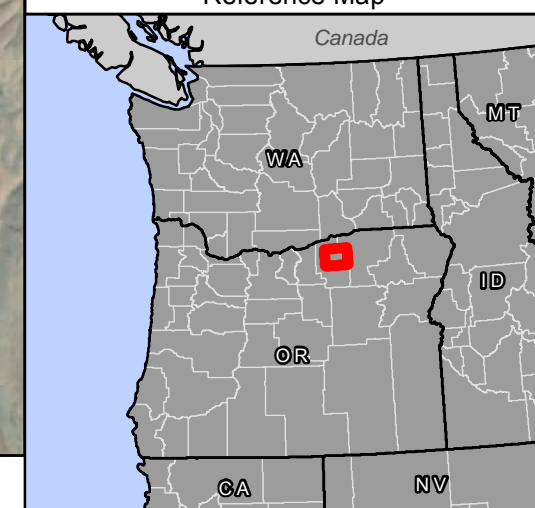
**Figure C-1  
Facility Overview**

MORROW AND UMATILLA COUNTIES, OR

- Approved Site Boundary  
(Approved Wind Micrositing Corridors)
- Amended Site Boundary  
(Proposed Solar Micrositing Corridors)
- State Highway
- County Boundary



Reference Map



P:\GIS\PROJECTS\NextEra\Wheatridge\_Solar\Figures\Exhibit\_C\NextEra\_Wheatridge\_RFA4\_ExhibitC\_FigureC1\_11171\_20181127.mxd



1:130,000 WGS 1984 UTM Zone 11N

0 0.5 1 2 3 4 Miles



**Attachment B: Reviewing Agency Comments on preliminary Request for Amendment 4**

Attachment B- Reviewing Agency Comments pRFA4 Cover

WRWAMD4Doc3 pRFA Reviewing Agency Comment CTUIR 2019-02-19

WRWAMD4Doc4 pRFA Reviewing Agency Comment CTUIR 2019-06-19

WRWAMD4Doc5 pRFA Reviewing Agency Comment DLCD 2019-03-22

WRWAMD4Doc6 pRFA Reviewing Agency Comment DOGAMI 2019-03-15

WRWAMD4Doc7 pRFA Reviewing Agency Comment SHPO 019-01-19

WRWAMD4Doc8 pRFA Reviewing Agency Comment SHPO 2019-07-09

WRWAMD4Doc9 pRFA Reviewing Agency Comment\_Wetland Delineation DSL Concurrence  
2019-04-18

WRWAMD4Doc10 pRFA SAG Comment Morrow County 2019-02-21



**Confederated Tribes of the  
Umatilla Indian Reservation**

**Department of Natural Resources**

46411 Timine Way, Pendleton, Oregon 97801

## MEMORANDUM

To: Sarah Esterson, Senior Siting Analyst  
Oregon Department of Energy  
Sent via email to: Sarah.Esterson@oregon.gov

From: Teara Farrow Ferman, Cultural Resources Protection Program Manager  
Confederated Tribes of the Umatilla Indian Reservation *Teara Farrow Ferman*  
46411 Timine Way, Pendleton, OR 97801  
TearaFarrow Ferman@ctuir.org  
541-276-3447

Date: February 19, 2019

RE: Confederated Tribes of the Umatilla Indian Reservation's Comments on the Wheatridge  
Wind Energy Facility Preliminary Request for Amendment 4 (pRFA4)

General Comments:

Thank you for contacting the Confederated Tribes of the Umatilla Indian Reservation (CTUIR) regarding the Wheatridge Wind Energy Facility Preliminary Request for Amendment 4. The CTUIR offers the following comments for the project.

Specific Comments:

The archaeological survey report completed for the initial permit for the Wheatridge project recommended that a Traditional Use survey be completed for the project area and that the ground disturbing portions of the project be monitored for cultural resources. These are the same recommendations that the CTUIR has for this and other project Amendments.

It appears that the current request for amendment will not have an impact to archaeological resources, but the CTUIR's recommendations from the first phases of this project for a traditional use survey is still outstanding. When project construction begins for this project the CTUIR recommends that a cultural resources monitor be on-site during the ground disturbing portions of the project.

## ESTERSON Sarah \* ODOE

---

**From:** Teara Farrow Ferman <TearaFarrowFerman@ctuir.org>  
**Sent:** Tuesday, June 11, 2019 2:16 PM  
**To:** ESTERSON Sarah \* ODOE  
**Cc:** Shawn Steinmetz  
**Subject:** RE: CTUIR Comments - Wheatridge Wind Energy Facility - Preliminary Request for Amendment 4 of Site Certificate

Yes, our concerns have been adequately addressed with the on-site monitor for the ground disturbing work and contracting with us to conduct the traditional use study.

### TEARA FARROW FERMAN

The information in this e-mail may be confidential and intended only for the use and protection of the Confederated Tribes of the Umatilla Indian Reservation. If you have received this email in error, please immediately notify me by return e-mail and delete this from your system. If you are not an authorized recipient for this information, then you are prohibited from any review, dissemination, forwarding or copying of this e-mail and its attachments. Thank you.

---

**From:** ESTERSON Sarah \* ODOE [mailto:Sarah.Esterson@oregon.gov]  
**Sent:** Tuesday, June 11, 2019 11:19 AM  
**To:** Teara Farrow Ferman <TearaFarrowFerman@ctuir.org>  
**Cc:** Shawn Steinmetz <ShawnSteinmetz@ctuir.org>  
**Subject:** RE: CTUIR Comments - Wheatridge Wind Energy Facility - Preliminary Request for Amendment 4 of Site Certificate

**EXTERNAL EMAIL: Please use caution when clicking links or opening attachments.**

Great – thank you!

Would you be comfortable confirming whether CTUIR concerns related to the proposed 150 MW solar component (Request for Amendment 4) associated with the 500 MW wind facility (Wheatridge Wind Energy Facility) have been adequately addressed?



**Sarah T. Esterson**  
Senior Siting Analyst  
550 Capitol St. NE | Salem, OR 97301  
P: 503-373-7945  
C: 503-385-6128  
P (In Oregon): 800-221-8035



Stay connected!

---

**From:** Teara Farrow Ferman [mailto:TearaFarrowFerman@ctuir.org]  
**Sent:** Tuesday, June 11, 2019 11:00 AM  
**To:** ESTERSON Sarah \* ODOE <Sarah.Esterson@oregon.gov>

**Cc:** Shawn Steinmetz <[ShawnSteinmetz@ctuir.org](mailto:ShawnSteinmetz@ctuir.org)>

**Subject:** RE: CTUIR Comments - Wheatridge Wind Energy Facility - Preliminary Request for Amendment 4 of Site Certificate

Hi Sarah,

Wheatridge has agreed to have an on-site monitor present during ground disturbing work (trenches, roads, etc.) and we are working on getting a contract in place for the traditional use report.

I hope this clarifies your questions.

**TEARA FARROW FERMAN**

The information in this e-mail may be confidential and intended only for the use and protection of the Confederated Tribes of the Umatilla Indian Reservation. If you have received this email in error, please immediately notify me by return e-mail and delete this from your system. If you are not an authorized recipient for this information, then you are prohibited from any review, dissemination, forwarding or copying of this e-mail and its attachments. Thank you.

---

**From:** ESTERSON Sarah \* ODOE [<mailto:Sarah.Esterson@oregon.gov>]

**Sent:** Tuesday, June 4, 2019 8:14 AM

**To:** Teara Farrow Ferman <[TearaFarrowFerman@ctuir.org](mailto:TearaFarrowFerman@ctuir.org)>

**Cc:** Shawn Steinmetz <[ShawnSteinmetz@ctuir.org](mailto:ShawnSteinmetz@ctuir.org)>

**Subject:** RE: CTUIR Comments - Wheatridge Wind Energy Facility - Preliminary Request for Amendment 4 of Site Certificate

**EXTERNAL EMAIL: Please use caution when clicking links or opening attachments.**

Hi Teara,

Do you have time in the next two weeks to discuss your comments on Wheatridge Wind Energy Request for Amendment 4, particularly the recommendations for a traditional use survey. Let me know if there is a date/time that works best for you and I will set up a call.

Thanks,  
Sarah



**Sarah T. Esterson**

Senior Siting Analyst

550 Capitol St. NE | Salem, OR 97301

P: 503-373-7945

C: 503-385-6128

P (In Oregon): 800-221-8035



Stay connected!

---

**From:** Teara Farrow Ferman [<mailto:TearaFarrowFerman@ctuir.org>]

**Sent:** Tuesday, February 19, 2019 3:40 PM

**To:** ESTERSON Sarah \* ODOE <[Sarah.Esterson@oregon.gov](mailto:Sarah.Esterson@oregon.gov)>

**Subject:** CTUIR Comments - Wheatridge Wind Energy Facility - Preliminary Request for Amendment 4 of Site Certificate

## TEARA FARROW FERMAN

The information in this e-mail may be confidential and intended only for the use and protection of the Confederated Tribes of the Umatilla Indian Reservation. If you have received this email in error, please immediately notify me by return e-mail and delete this from your system. If you are not an authorized recipient for this information, then you are prohibited from any review, dissemination, forwarding or copying of this e-mail and its attachments. Thank you.

---

**From:** ESTERSON Sarah \* ODOE [<mailto:Sarah.Esterson@oregon.gov>]

**Sent:** Friday, January 18, 2019 2:29 PM

**To:** Teara Farrow Ferman <[TearaFarrowFerman@ctuir.org](mailto:TearaFarrowFerman@ctuir.org)>; Shawn Steinmetz <[ShawnSteinmetz@ctuir.org](mailto:ShawnSteinmetz@ctuir.org)>

**Subject:** Wheatridge Wind Energy Facility - Preliminary Request for Amendment 4 of Site Certificate - Review Request by Feb 22, 2019

## EXTERNAL EMAIL

Teara and Shawn,

This email is to inform the Confederated Tribes of the Umatilla Indian Reservation of the Oregon Department of Energy's receipt of the preliminary Request for Amendment 4 (pRFA4) for the Wheatridge Wind Energy Facility Site Certificate. The Wheatridge Wind Energy Facility is an approved but not yet constructed wind energy facility, to be located in Morrow and Umatilla counties, with up to 292 wind turbines and a maximum capacity of 500 megawatts (see attached figure for general location reference).

pRFA4 requests approval to amend the site boundary from 13,097 to 14,624 acres; extend the construction commencement deadline from May 24, 2023 to December 31, 2023; and construct and operate the following additional components: a 150 MW photovoltaic solar energy system; 41 distributed energy storage system sites; and, expansion of a previously approved substation site from 5 to 10 acres. The proposed facility components would be located within Morrow County. Type A review will be maintained for RFA4.

A Cultural Resources Survey Report has been submitted to SHPO for this amendment request and should be available for review in SHPO's database – but, please let me know if you would like me to provide GIS data to review approved and proposed facility location, or would like a copy of the confidential Cultural Resources Survey Report sent to your office directly.

We would like to request your review and comment on the pRFA4 by **February 22, 2019**. In general, please review and comment on the Cultural Resources Survey Report and Exhibit S of the amendment request. The amendment request, including Exhibit S, is available on our project website per the following link: <https://www.oregon.gov/energy/facilities-safety/facilities/Pages/WRW.aspx>

Let me know if you have questions and whether the Feb 22, 2019 review timeline is feasible.

Thanks,  
Sarah

**Sarah T. Esterson**  
Energy Facility Siting Analyst  
Oregon Department of Energy  
550 Capitol St NE, 1<sup>st</sup> Floor  
Salem, OR 97301  
P:(503) 373-7945  
C: (503) 385-6128

[Oregon.gov/energy](http://Oregon.gov/energy)





## ESTERSON Sarah \* ODOE

---

**From:** Murphy, Tim <timothy.murphy@state.or.us>  
**Sent:** Friday, March 22, 2019 8:08 AM  
**To:** ESTERSON Sarah \* ODOE  
**Cc:** JININGS Jon; STENBECK Phil  
**Subject:** Wheatridge Wind Energy Facility - Preliminary Request for Amendment 4 of Site Certificate - Reviewing Agency Request by March 22, 2019

Hi Sarah,

Thank you for the opportunity to comment on the proposed amendment. Amendment 4 proposes the addition of photovoltaic solar power generation facility, battery storage, and two lines. The applicant has concluded that the proposed solar facility exceeds the acreage thresholds for solar projects located on high-value farmland and arable land and has requested a goal exception. It is our understanding that the goal exception is subject to ORS 469.504 and ODOE rules rather than ORS 197.732-734 and DLCD exception rules.

Based on ODOE input, we understand that the project is subject to state rules in effect on November 30, 2018. Thus DLCD has reviewed the proposed amendments in accordance with the rules in effect at that time, rather than the current solar rules which became effective on January 29, 2019.

We request that the applicant address the following comments:

1. The two lines, identified as "collector lines" in the application, appear to meet the definition of an "associated transmission line" in ORS 469.300. The applicant should address the criteria for associated transmission lines in ORS 215.274 and OAR 660-033-0130(16)(b). Also ORS 215.276 applies to associated transmission lines.
2. More information is needed to properly address ORS 215.296 and OAR 660-033-0130(5). The applicant must identify which accepted farm and forest practices are occurring on surrounding lands. In *Schellenberg v. Polk County (1992)*, the Land Use Board of Appeals found that, in order to demonstrate compliance with ORS 215.296(1), an applicant must "(1) describe the farm and forest practices on surrounding lands devoted to farm or forest use, (2) explain why the proposed use will not force a significant change in those practices, and (3) explain why the proposed use will not significantly increase the cost of those practices."
3. Figure K-4 shows project tract boundaries but does not specify the current owner names or the owners of other adjacent lands. This information is important for verifying compliance with the solar rules in OAR 660-033-0130(38). It would be very helpful if the applicant provided this information and also showed the complete boundary of Tract 2 on Figure K-4. Please let us know if this information is available elsewhere.

Thanks again. Let us know if you need any additional information or clarification. Please enter this email into the record of this proceeding.



**Tim Murphy**

Farm and Forest Lands Specialist | Community Services Division  
Oregon Department of Land Conservation and Development  
635 Capitol Street NE, Suite 150 | Salem, OR 97301-2540  
Direct: 503-934-0048 | Main: 503-373-0050  
[timothy.murphy@state.or.us](mailto:timothy.murphy@state.or.us) | [www.oregon.gov/LCD](http://www.oregon.gov/LCD)

## ESTERSON Sarah \* ODOE

---

**From:** WANG Yumei \* DGMI  
**Sent:** Friday, March 15, 2019 6:09 PM  
**To:** ESTERSON Sarah \* ODOE  
**Cc:** WANG Yumei \* DGMI  
**Subject:** dogami comments for Wheatridge Wind Energy Facility - Preliminary Request for Amendment 4 of Site Certificate

Hi Sarah,

The Oregon Department of Geology and Mineral Industries (DOGAMI) performed a review of the Wheatridge Wind Energy Facility, November 2018, Exhibit H: Geologic and Soil Stability for the preliminary Request for Amendment 4 (pRFA4). Our main comment is that they apparently haven't yet completed any site-specific geotechnical studies to adequately characterize the site soil type and seismic hazards, and have seemingly made assumptions without on-site work. Below are our specific comments.

Exhibit H Page 4. "Loess is typically 15-30 ft in thickness" (Wheatridge, 2015).

DOGAMI Comment 1: This does not appear to be supported by on-site geotechnical exploration studies.

Exhibit H Page 7. "Using the subsurface information currently available, the Facility would be designed for a Site Class C"

DOGAMI Comment 2: It is unclear what subsurface information is currently available. It does not appear that on-site geotechnical exploration studies were conducted. As such, DOGAMI would not approve that the Facility should be designed for a Site Class C soil. The Site Class should be determined by a qualified professional, such as a licensed geotechnical engineer. Subsurface exploration for the proposed facility should be required to determine seismic design parameters before construction. We note that Table H-1 seismic design parameters were developed are based on Site Class C soil, which DOGAMI does not approve of.

If the Applicant would like to estimate preliminary seismic design parameters before they conduct subsurface exploration, DOGAMI would find it acceptable to use the default soil class of Site Class D. The Applicant should explain their plans for a qualified professional to conduct geotechnical studies that include seismic hazard assessments. Their plans should address subsurface exploration plans, testing plans, and their proposed methods of how their structures would tolerate long duration ground motions. Subsurface exploration should be considered at fault and fault zones and locations where ground shaking can influence the site response, such as near drainages with softer soil conditions and areas with thicker loess deposits.

Exhibit H Page 10. "Based on the current subsurface information available, it is recommended that the Facility be designed for Site Class C. However, examination of the geology mapped for the site suggests that shallow bedrock formations (Wanapum Basalt) may exist at certain locations, where the  $S_b$  response spectra would apply."

DOGAMI Comment 3: See DOGAMI Comment 2. DOGAMI would not approve that the Facility should be designed for a Site Class C soil or Site Class B without evidence of geotechnical studies performed by a qualified professional with those recommendations supported by relevant site data.

Exhibit H Page 11.

"Based on geotechnical and geological information, a Site Class for the soil/bedrock at the site is assigned. In this case, as described previously in Section 7.2.1, a Site Class C (very dense soil to soft rock) is appropriate for the Facility."

DOGAMI Comment 4: See DOGAMI Comments 2 and 3. DOGAMI would not approve that the Facility should be designed for a Site Class C without evidence of geotechnical studies performed by a qualified professional with recommendations supported by relevant site data.

Exhibit H Page 11.

“The geotechnical studies and analyses provide site-specific parameters including but not necessarily limited to: moisture content and density, soil/bedrock bearing capacity, bedrock depth, settlement characteristics, structural backfill characteristics, soil improvement (if required), and dynamic soil/bedrock properties including shear modulus and Poisson’s Ratio of the subgrade. The foundation design engineer uses these parameters to design a foundation suitable for the Facility and verifies that the foundation/soil interaction meets or exceeds the minimum requirements stated by the original equipment manufacturer for the Facility.”

DOGAMI Comment 5: The purpose of this text is unclear. It appears to be general information that is intended to inform the reader about geotechnical studies and foundation design practices. Or, is it referring to a future geotechnical study that will be completed? If so, please provide information on future plans.

Exhibit H Page 11.

“The probability of a fault displacement within the Amended Site Boundary is considered low because of the distance (> 25 miles away) of known or mapped potentially active faults from Amended Site Boundary and the absence of faults within the Amended Site Boundary (Figure H-2).”

DOGAMI Comment 6: This statement does not appear to be supported with any geotechnical studies completed by the Applicant. If current state-of-practice fault mapping has not been conducted in the area, then the fault mapping is considered to be incomplete. As such, it is likely that faults have not been discovered. The lack of known active faults does not mean that there are not active faults in the area. Please add the word “known” to clarify that there isn’t necessarily an absence of faults but instead an absence of known faults.

Exhibit H Page 11.

“Unknown faults could exist, or new fault ruptures could form during a significant seismic event, but the likelihood of either occurrence is low based on the lack of active faults identified during previous geologic investigations.”

DOGAMI Comment 7: See DOGAMI Comment 6. If current state-of-practice fault mapping has not been conducted in the area, then the fault mapping is considered to be incomplete. As such, it is likely that faults have not been discovered. This does not mean that the likelihood of occurrence is low. Please add the word “known” to clarify that there isn’t necessarily a “lack of active faults” but a “lack of known active faults” identified during previous geologic investigations.

Exhibit H Page 12

“The soils in the Amended Site Boundary are not saturated and are generally cohesive in nature. Along with the relatively low seismic event potential, this indicates that the liquefaction of soils within the Amended Site Boundary is considered extremely unlikely.”

DOGAMI Comment 8: See DOGAMI Comment 2. DOGAMI would not approve that the soils at the Facility are not saturated, are generally cohesive, and are extremely unlikely to liquefy without evidence of geotechnical studies performed by a qualified professional with those recommendations supported by relevant site data.

Exhibit H Page 12

“A final geotechnical exploration will be conducted to collect pertinent data for the design of the Facility, to mitigate potential hazards that could be created during a seismic event.”

DOGAMI Comment 9: The text is unclear. Was there a preliminary geotechnical exploration and report? If yes, please provide to ODOE and DOGAMI. Also, please provide information on future geotechnical explorations including when they will be conducted and what they will include.

Exhibit H Page 13

“The landslide hazards will be investigated and mapped before final facility layout and design.”

DOGAMI Comment 10: Please provide information on future geotechnical explorations and reports including methods to determine landslide hazards and mitigation of hazards.

Exhibit H Page 15

“The Facility will be designed, engineered, and constructed to adequately avoid potential dangers to human safety presented by seismic hazards. Substation structures will be designed in accordance with the OSSC. “

DOGAMI Comment 12: Substation structures should be designed not according to OSSC but also to other relevant codes, standards and reference documents. These include: ASCE 7; National Electric Safety Code (NESC); ASCE 113 Guide for Design of Substation Structures; IEEE 693, Recommended Practice for Seismic Design of Substations; IEEE 1527 Recommended Practice for Design of Buswork Located in Seismically Active Areas; and various IEC and ANSI standards. Please specify what codes, standards and reference documents including their years, e.g., ASCE 7-16).

Exhibit H Attachment H-6 Sample Solar Facility Emergency Action Plan

DOGAMI Comment 13: The Emergency Action Plan developed for the proposed Wheatridge Wind Energy Facility should include an earthquake emergency action plan.

Thank you for the opportunity to review the document. I'll follow up with you during our 4/16 meeting to address any questions.

Yumei

Yumei Wang, P.E. | Resilience Engineer  
Oregon Department of Geology and Mineral Industries (DOGAMI)  
800 NE Oregon Street, Suite 965, Portland, Oregon 97232  
Mobile: (503) 913-5749  
[yumei.wang@oregon.gov](mailto:yumei.wang@oregon.gov) | [www.oregongeology.org](http://www.oregongeology.org)

Follow us! [Facebook](#) [Twitter](#)

*Unless otherwise indicated, all information in this correspondence is classified as Level 1, "Published" according to State of Oregon statute and administrative policy.*

---

**From:** ESTERSON Sarah \* ODOE  
**Sent:** Tuesday, February 19, 2019 4:46 PM  
**To:** WANG Yumei \* DGMI <[Yumei.WANG@oregon.gov](mailto:Yumei.WANG@oregon.gov)>  
**Subject:** Wheatridge Wind Energy Facility - Preliminary Request for Amendment 4 of Site Certificate

Yumei,

This email is to inform DOGAMI of the Oregon Department of Energy's receipt of the preliminary Request for Amendment 4 (pRFA4) for the Wheatridge Wind Energy Facility Site Certificate. The Wheatridge Wind Energy Facility is an approved but not yet constructed wind energy facility, to be located in Morrow and Umatilla counties, with up to 292 wind turbines and a maximum capacity of 500 megawatts.

pRFA4 requests approval to amend the site boundary from 13,097 to 14,624 acres; extend the construction commencement deadline from May 24, 2023 to December 31, 2023; and construct and operate the following additional components: a 150 MW photovoltaic solar energy system; 41 distributed energy storage system sites; and, expansion of a previously approved substation site from 5 to 10 acres. The proposed facility components would be located within Morrow County – GIS files are provided in attached zip file. Please let me know if you have issues accessing these files.

We would like to request your review and comment on the pRFA4 by **March 22, 2019**. In general, please review and comment related to the following scope:

- Issues significant to the agency.
- Your agency's conclusions concerning the proposed facility components and compliance with state statutes, administrative rules, or ordinances administered by the agency.
- A list of site certificate conditions recommended by your agency.

- Any other information that the reviewing agency believes will be useful to the Council in reviewing the site certificate application.

The amendment request is available on our project website per the following link:

<https://www.oregon.gov/energy/facilities-safety/facilities/Pages/WRW.aspx>. The Geo/Structural analysis (Exhibit H) is attached for reference.

Let me know if you have questions and whether the March 22, 2019 review timeline is feasible.

Thanks,  
Sarah

**Sarah T. Esterson**

Energy Facility Siting Analyst  
Oregon Department of Energy  
550 Capitol St NE, 1<sup>st</sup> Floor  
Salem, OR 97301  
P:(503) 373-7945  
C: (503) 385-6128

[Oregon.gov/energy](http://Oregon.gov/energy)





Oregon  
Kate Brown, Governor

Parks and Recreation Department  
State Historic Preservation Office  
725 Summer St NE Ste C  
Salem, OR 97301-1266  
Phone (503) 986-0690  
Fax (503) 986-0793  
[www.oregonheritage.org](http://www.oregonheritage.org)



January 29, 2019

Ms. Erin King  
Tetra Tech Inc  
17885 Von Karman Ave  
Irvine, CA 92614

RE: SHPO Case No. 13-0338  
Wheatridge Wind Energy Facility Project  
Wind and solar facility  
Multiple legals, Various, Morrow/Umatilla County

Dear Ms. King:

Thank you for submitting documentation on the project referenced above. In order for us to complete our review, please provide the following for 72967 Strawberry Lane, Morrow County:

- Additional photos of all the resources within the property boundary and additional documentation that includes construction dates and descriptions of these resources. If any of the additional resources are 50 years or older, please evaluate eligibility. An architectural description of the shed and a discussion of alterations is also needed.

Please submit this information to our office using the Go Digital Submittal process.

Based on the information provided, we are able to concur that Bombing Range Road, Butte Road, Strawberry Lane, and Lexington-Echo Highway (OR 207) are not eligible for listing in the National Register of Historic Places. When recording roads and other linear resources in the future, please refer to the Oregon SHPO *Guidance for Recording and Evaluating Linear Cultural Resources* (2013). This document is available on our website at <https://www.oregon.gov/oprd/HCD/SHPO/docs/ORLinearResourcesGuidancev2.pdf>. Please feel free to contact me if you have any questions, comments or need additional assistance.

Sincerely,

Tracy Schwartz  
Historic Preservation Specialist  
(503) 986-0677  
[tracy.schwartz@oregon.gov](mailto:tracy.schwartz@oregon.gov)

cc: Carrie Konkol, Tetra Tech Inc

**ESTERSON Sarah \* ODOE**

---

**From:** SCHWARTZ Tracy \* OPRD  
**Sent:** Tuesday, July 9, 2019 1:08 PM  
**To:** ESTERSON Sarah \* ODOE  
**Cc:** Erin.King@tetrattech.com  
**Subject:** SHPO Case No.: 13-0338, Wheatridge Wind Energy Facility Project  
**Attachments:** SHPO Response Letter Case Nbr SHPO Case No.\_ 13-0338.pdf

Hi Sarah,

Please find attached SHPO's response to your request for comment on cultural resources for the above-identified project. This attachment serves as your file copy. If you have any questions, please feel free to contact me.

Thanks!

-Tracy

Tracy Schwartz  
Review & Compliance | Historic Preservation Specialist Oregon SHPO  
725 Summer Street NE, Suite C  
Salem, OR 97301  
Phone: (503) 986-0677



Oregon  
Kate Brown, Governor

**Parks and Recreation Department**

State Historic Preservation Office

725 Summer St NE Ste C

Salem, OR 97301-1266

Phone (503) 986-0690

Fax (503) 986-0793

[www.oregonheritage.org](http://www.oregonheritage.org)



July 9, 2019

Ms. Sarah Esterson  
OR Dept of Energy  
550 Capitol St NE, 1st Flr  
Salem, OR 97301

RE: SHPO Case No. 13-0338  
Wheatridge Wind Energy Facility Project  
Wind and solar facility  
Mutiple legals, Various, Morrow/Umatilla County

Dear Ms. Esterson:

We have reviewed the materials submitted on the project referenced above, and we concur that Starvation Farms (72967 Strawberry Lane, Lexington) is not eligible for listing in the National Register of Historic Places due to a loss of historic integrity. This letter refers to above-ground historic resources only. Comments pursuant to a review for archaeological resources, if applicable, will be sent separately. Local regulations, if any, still apply and review under local ordinances may be required. Please feel free to contact me if you have any questions, comments, or need additional assistance.

Sincerely,

Tracy Schwartz  
Historic Preservation Specialist  
(503) 986-0677  
[tracy.schwartz@oregon.gov](mailto:tracy.schwartz@oregon.gov)

cc: Erin King, Tetra Tech Inc







# Oregon

Kate Brown, Governor

## Department of State Lands

775 Summer Street NE, Suite 100

Salem, OR 97301-1279

(503) 986-5200

FAX (503) 378-4844

[www.oregon.gov/dsl](http://www.oregon.gov/dsl)

April 18, 2019

NextEra Energy Resources

Attn: Mike Pappalardo

3526 Wintercreek Drive

Eugene, OR 97405

**State Land Board**

Kate Brown

Governor

Re: WD # 2019-0008 Wetland Delineation Report for Wheatridge Solar  
Assessment; Morrow County; Many TRS and TL, see Attached Table  
B-3 and B-4

Bev Clarno

Secretary of State

Tobias Read

State Treasurer

Dear Mr. Pappalardo:

The Department of State Lands has reviewed the wetland delineation report prepared by Tetra Tech, Inc. for the site referenced above. Please note that the study areas include only a portion of the tax lots described above (see the attached maps). Based upon the information presented in the report, and additional information submitted upon request, we concur with the waterway boundaries as mapped in the Figure 5 maps of the report (Figures 5, 5.1-5.3, and 5.1.1-5.1.13. Please replace all copies of the preliminary wetland maps with these final Department-approved maps.

Within the study areas, seven ephemeral waterways and one roadside ditch were identified. Under current regulations, a state permit is required for cumulative fill or annual excavation of 50 cubic yards or more in wetlands or below the ordinary high-water line (OHWL) of the waterway (or the 2-year recurrence interval flood elevation if OHWL cannot be determined). The ephemeral waterways are not regulated per OAR 141-085-0515(3) and the roadside ditch is not regulated per OAR 141-085-0515(10); therefore, are not subject to current state Removal-Fill permit requirements.

This concurrence is for purposes of the state Removal-Fill Law only. Federal or local permit requirements may apply as well. The Army Corps of Engineers will determine jurisdiction for purposes of the Clean Water Act. We recommend that you attach a copy of this concurrence letter to both copies of any subsequent joint permit application to speed application review.

Please be advised that state law establishes a preference for avoidance of wetland impacts. Because measures to avoid and minimize wetland impacts may include reconfiguring parcel layout and size or development design, we recommend that you work with Department staff on appropriate site design before completing the city or county land use approval process.

This concurrence is based on information provided to the agency. The jurisdictional determination is valid for five years from the date of this letter unless new information

determination are found in OAR 141-090-0045 (available on our web site or upon request). In addition, laws enacted by the legislature and/or rules adopted by the Department may result in a change in jurisdiction; individuals and applicants are subject to the regulations that are in effect at the time of the removal-fill activity or complete permit application. The applicant, landowner, or agent may submit a request for reconsideration of this determination in writing within six months of the date of this letter.

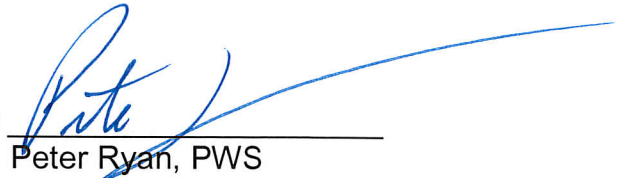
Thank you for having the site evaluated. Please phone me at 503-986-5271 if you have any questions.

Sincerely,



Daniel Evans, PWS  
Jurisdiction Coordinator

Approved by



Peter Ryan, PWS  
Aquatic Resource Specialist

Enclosures

ec: Jessica Taylor, Tetra Tech, Inc.  
Morrow Planning Department  
Brad Johnson, Corps of Engineers  
Heidi Hartman, DSL  
Sarah Esterson, ODOE  
Joy Vaughan, ODFW

# WETLAND DELINEATION / DETERMINATION REPORT COVER FORM

Fully completed and signed report cover forms and applicable fees are required before report review timelines are initiated by the Department of State Lands. Make checks payable to the Oregon Department of State Lands. To pay fees by credit card, go online at <https://apps.oregon.gov/DSL/EPS/program?key=4>.

Attach this completed and signed form to the front of an unbound report or include a hard copy with a digital version (single PDF file of the report cover form and report, minimum 300 dpi resolution) and submit to: **Oregon Department of State Lands, 775 Summer Street NE, Suite 100, Salem, OR 97301-1279**. A single PDF of the completed cover form and report may be e-mailed to [Wetland\\_Delineation@dsl.state.or.us](mailto:Wetland_Delineation@dsl.state.or.us). For submittal of PDF files larger than 10 MB, e-mail DSL instructions on how to access the file from your ftp or other file sharing website.

Contact and Authorization Information	
<input checked="" type="checkbox"/> Applicant <input type="checkbox"/> Owner Name, Firm and Address: Mike Pappalardo NextEra Energy Resources 3526 Wintercreek Drive, Eugene OR 97405	Business phone # (541)302-1345 Mobile phone # (optional) E-mail: <a href="mailto:mike.pappalardo@nexteraenergy.com">mike.pappalardo@nexteraenergy.com</a>
<input type="checkbox"/> Authorized Legal Agent, Name and Address (if different):	Business phone # Mobile phone # (optional) E-mail:
I either own the property described below or I have legal authority to allow access to the property. I authorize the Department to access the property for the purpose of confirming the information in the report, after prior notification to the primary contact.	
Typed/Printed Name: <u>Mike Pappalardo</u> Date: <u>01/04/2019</u>	Signature: <u>Michael E. Pappalardo</u> Special instructions regarding site access:
Project and Site Information	
Project Name: <u>Wheatridge Solar Assessment</u>	Latitude: <u>45.559639</u> Longitude: <u>-119.633451</u> decimal degree - centroid of site or start & end points of linear project
Proposed Use: <u>A Solar Project up to 350MW</u>	Tax Map # <u>Attachment B</u> Tax Lot(s)
Project Street Address (or other descriptive location): The Project is located between Hermiston and Lexington, Oregon.	Tax Map # <u>For Township, Range, and Section, see Attachment C</u> Tax Lot(s)
City: _____ County: <u>Morrow &amp; Umatilla</u>	Township _____ Range _____ Section _____ QQ _____ Use separate sheet for additional tax and location information
Waterway: _____ River Mile: _____	
Wetland Delineation Information	
Wetland Consultant Name, Firm and Address: Jessica Taylor at Tetra Tech, Inc. 14 E Main St., Suite 210 Walla Walla WA 99362	Phone # (509) 386-5036 Mobile phone # (if applicable) E-mail: <a href="mailto:jessica.taylor@tetratech.com">jessica.taylor@tetratech.com</a>
The information and conclusions on this form and in the attached report are true and correct to the best of my knowledge.	
Consultant Signature: <u>[Signature]</u>	Date: <u>1/3/2019</u>
Primary Contact for report review and site access is <input type="checkbox"/> Consultant <input type="checkbox"/> Applicant/Owner <input type="checkbox"/> Authorized Agent	
Wetland/Waters Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Study Area size: <u>782</u> Total Wetland Acreage: <u>0</u>
Check Applicable Boxes Below	
<input type="checkbox"/> R-F permit application submitted <input type="checkbox"/> Mitigation bank site <input type="checkbox"/> Industrial Land Certification Program Site <input type="checkbox"/> Wetland restoration/enhancement project (not mitigation) <input checked="" type="checkbox"/> Previous delineation/application on parcel If known, previous DSL # <u>WD2014-0534</u>	<input type="checkbox"/> Fee payment submitted \$ _____ <input type="checkbox"/> Fee (\$100) for resubmittal of rejected report <input type="checkbox"/> Request for Reissuance. See eligibility criteria. (no fee) DSL # _____ Expiration date _____ <input type="checkbox"/> LWI shows wetlands or waters on parcel Wetland ID code _____
For Office Use Only	
DSL Reviewer: <u>AB/DE</u> Fee Paid Date: ____/____/____	DSL WD # <u>2019-0008</u>
Date Delineation Received: <u>1/7/19</u> Scanned: <input type="checkbox"/> Electronic: <input checked="" type="checkbox"/>	DSL App.# _____



Table B-3. Township, Range, Section within the Project Study Area

Township	Range	Section
001N	025E	013
001N	025E	024
001N	026E	006
001N	026E	007
001N	026E	008
001N	026E	010
001N	026E	009
001N	026E	017
001N	026E	018
001N	026E	016
001N	026E	020
001N	026E	019
001N	026E	029
001N	026E	030
002N	028E	020
002N	028E	021
002N	028E	028
002N	028E	029
002N	028E	033

Table B-4. Tax Map Numbers within the Project Study Area

Attachment B: Tax Map	
#	Tax Map #
	2N2800001900
	01N26E00003502
	01N26E00003500
	01N26E00003400
	01N26E00003300
	01N26E00003301
	01N26E00003600
	01N26E00003201
	01N26E00003200
	01N26E00002900
	01N26E00002700
	01N25E00001600
	01N26E00001500
	01N26E00001102
	01N25E00003100
	01N26E00001200
	01N26E00001301
	01N26E00001100

P:\GIS\PROJECTS\NextEra\Wheatridge\WXDs\Wetland\_Delineation\_Report\NextEra\_Wheatridge\_Wetland\Delin\_Fig01\_ProjectLocation\_11171\_20181114.mxd

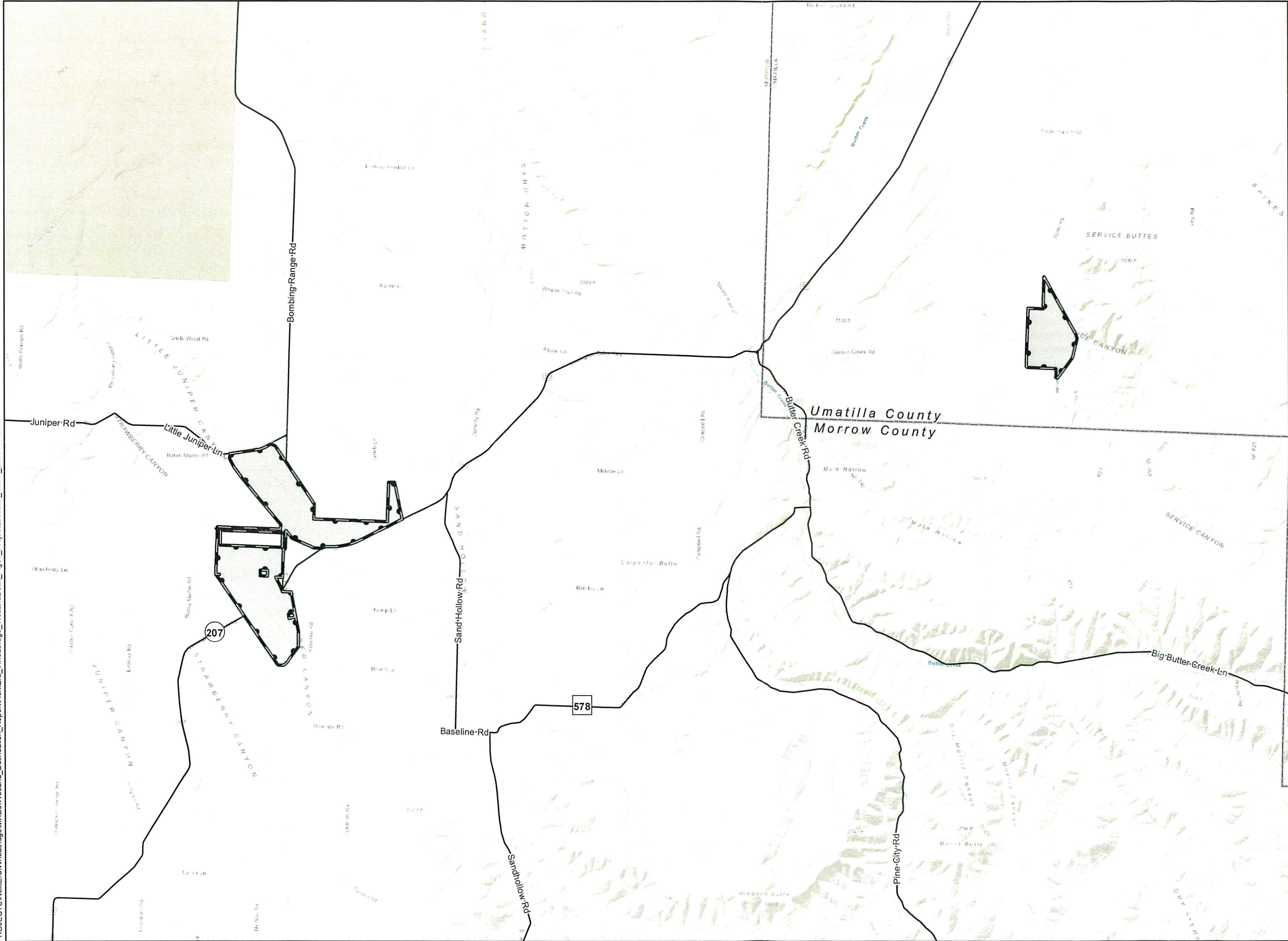


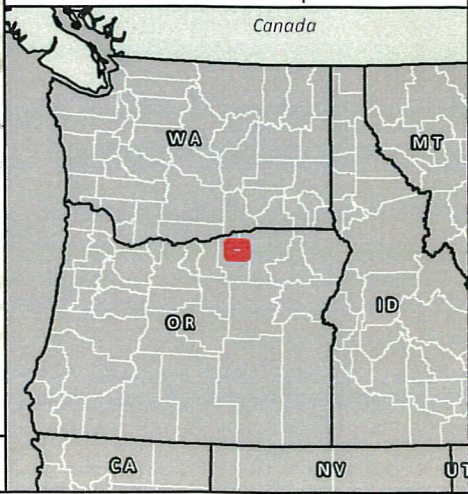
Figure 1  
Project Location

MORROW AND UMATILLA COUNTIES, OR

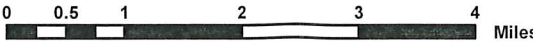
- Study Area
- Secondary Road
- County Boundary



Reference Map

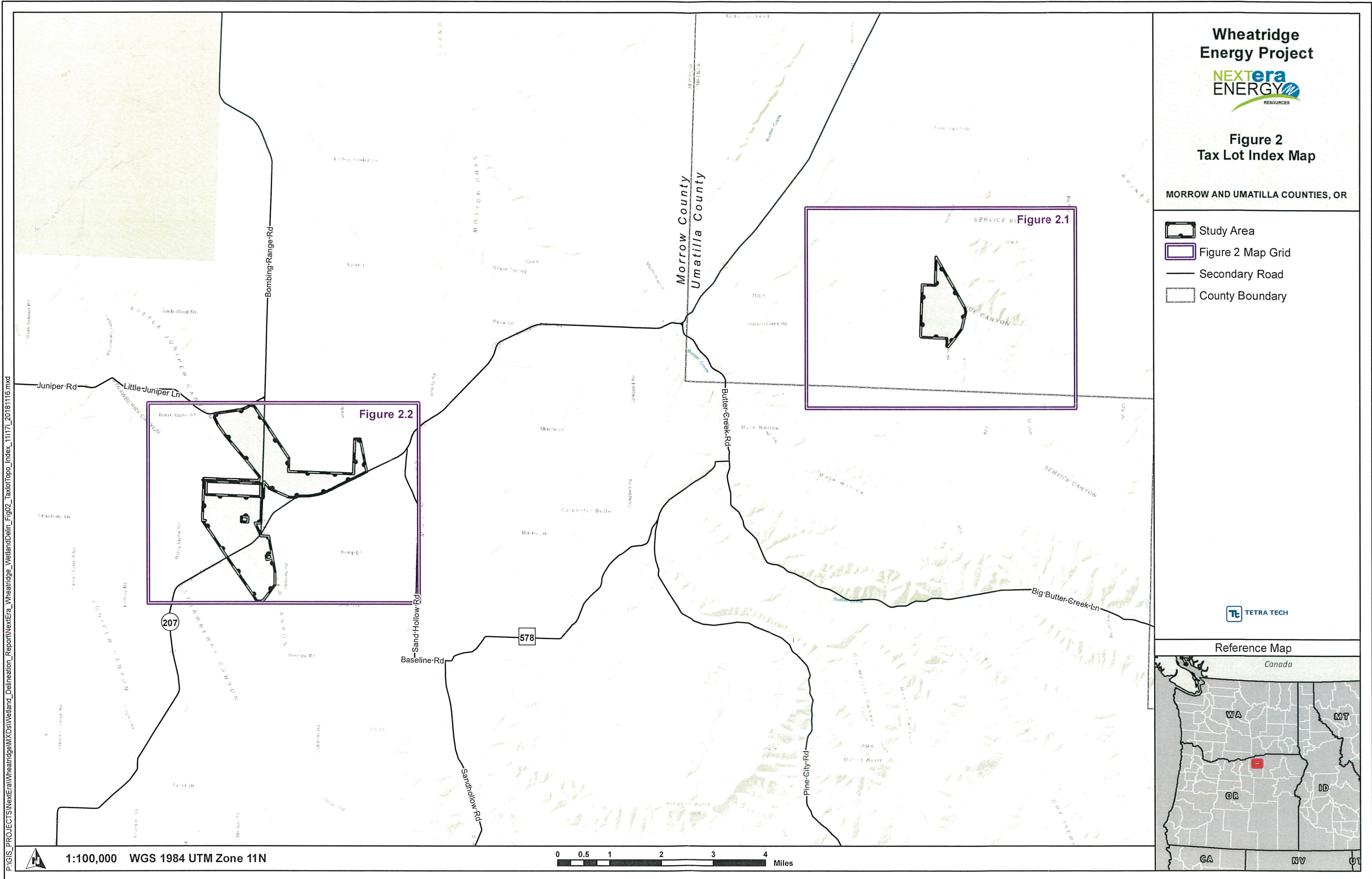


1:100,000 WGS 1984 UTM Zone 11N









P:\GIS\PROJECTS\NextEra\Wheatridge\MXDs\Wetland\_Delineation\_Report\NextEra\_Wheatridge\_Wetland\Delin\_Fig02\_TaxlotTopo\_Index\_1117\_20181116.mxd



**Figure 2**  
**Tax Lot Index Map**

MORROW AND UMATILLA COUNTIES, OR

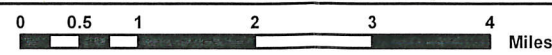
-  Study Area
-  Figure 2 Map Grid
-  Secondary Road
-  County Boundary



Reference Map






1:100,000 WGS 1984 UTM Zone 11N



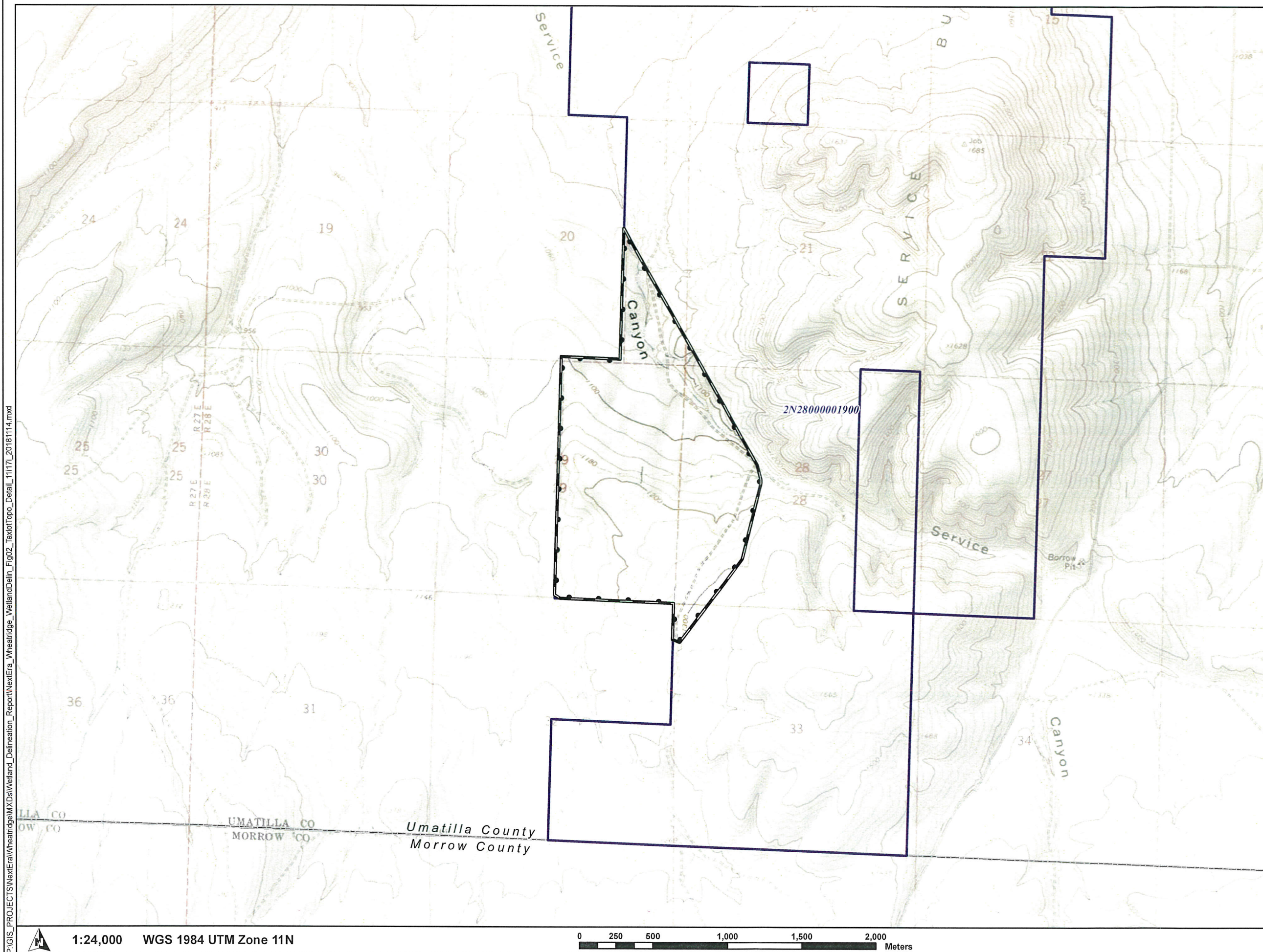
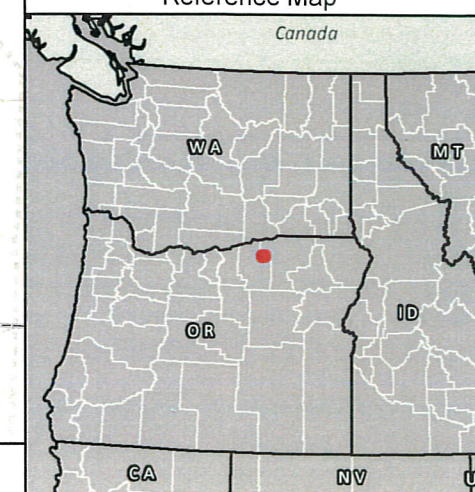


MORROW AND UMATILLA COUNTIES, OR





-  Study Area  
 Taxlot Boundary  
 County Boundary



Reference Map

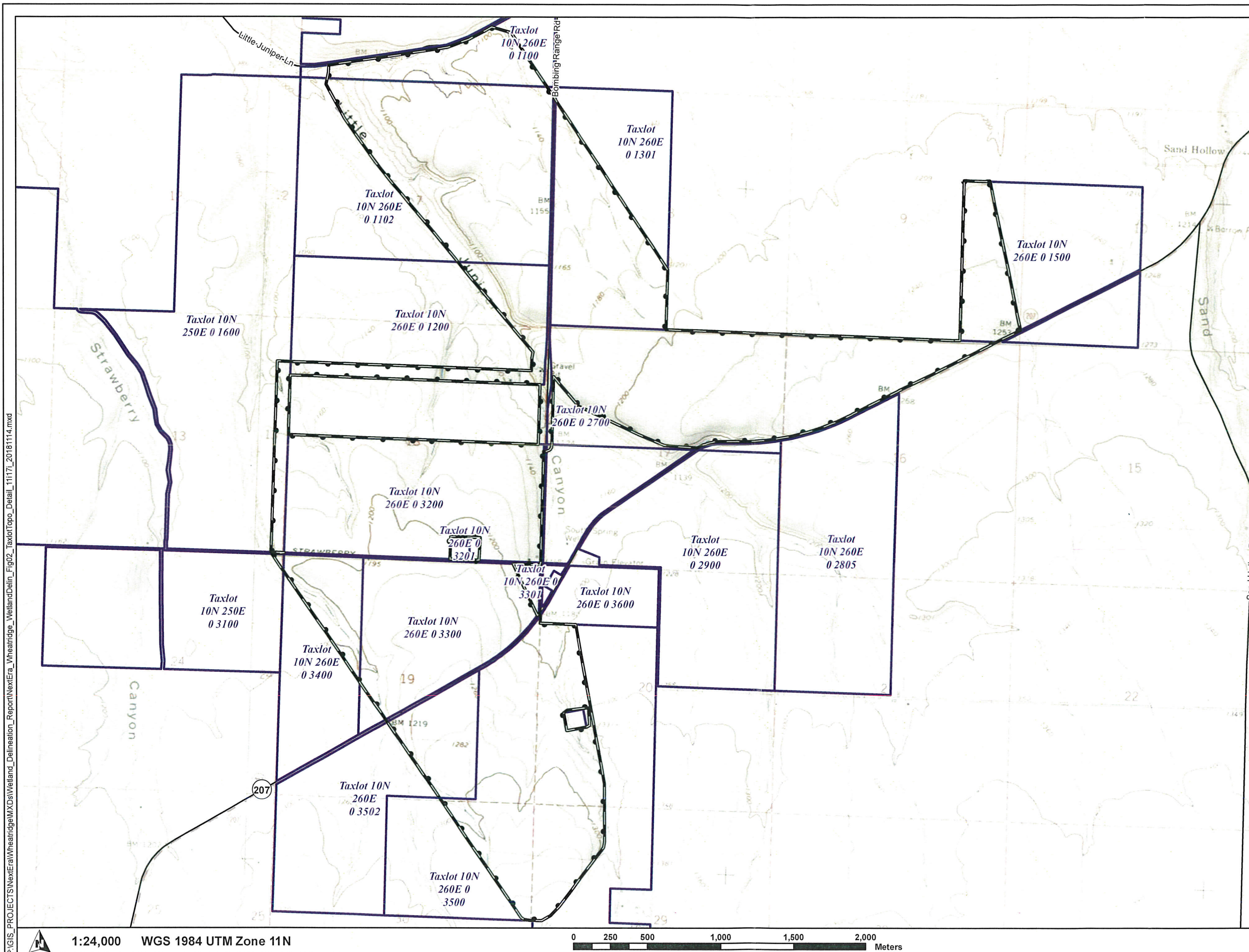




-  Study Area
-  Taxlot Boundary
-  Secondary Road
-  County Boundary



## Reference Map





DSL WD # 2019-0008  
Approval Issued 4-18-2019  
Approval Expires 4-18-2024



Figure 5  
Waters Delineation Map  
Index Map

MORROW AND UMATILLA COUNTIES, OR

- Study Area
- Map Grid
- Secondary Road
- County Boundary

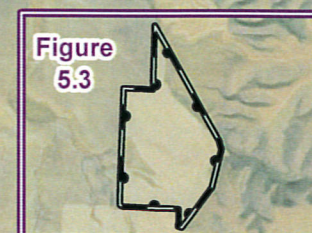


Figure 5.1

Figure 5.2

207

578

Juniper Rd

Little Juniper Ln

Bombing Range Rd

Sand Hollow Rd

Baseline Rd

Sand Hollow Rd

Butter Creek Rd

Umatilla County  
Morrow County

Big Butter Creek Ln

Pine City Rd

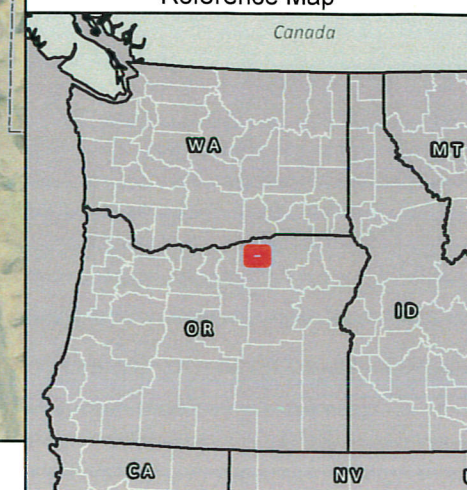


1:100,000 WGS 1984 UTM Zone 11N

0 0.5 1 2 3 4 Miles



Reference Map





DSL WD # 2019-0008  
Approval Issued 4-18-2019  
Approval Expires 4-18-2024



Figure 5.1  
Waters Delineation Map  
Index Map

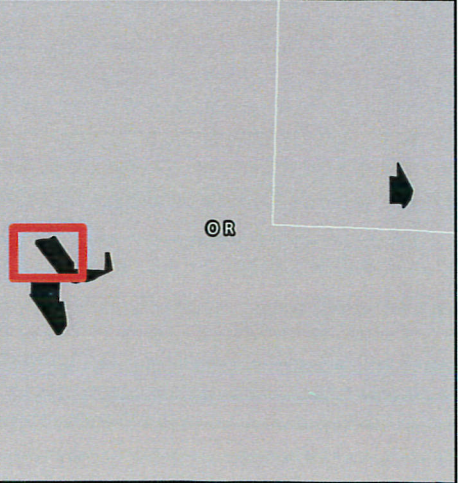
MORROW AND UMATILLA COUNTIES, OR

- Study Area
- Map Grid
- Surveyed Water (Maximum OHWL Width)
- Taxlot Boundary
- County Boundary

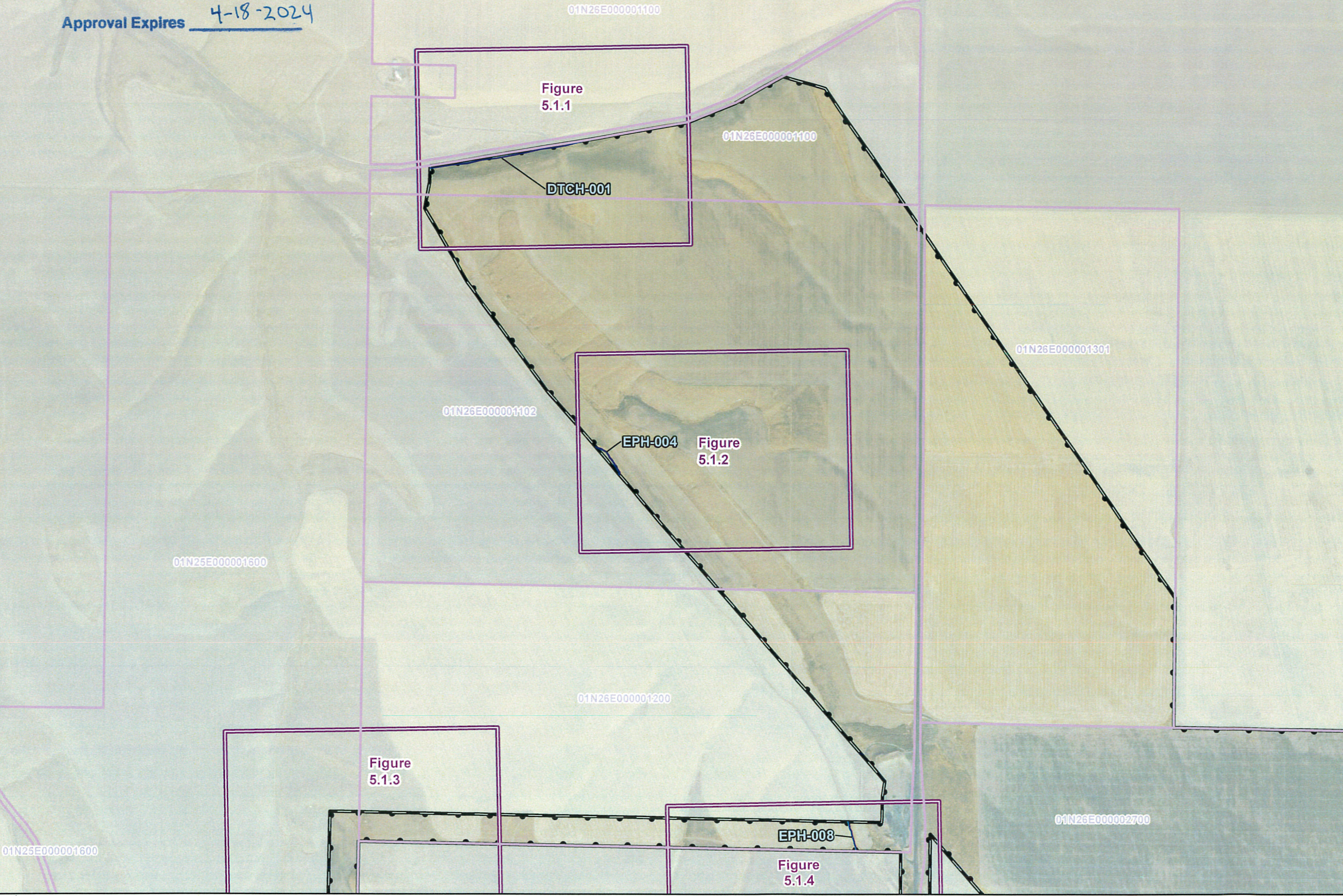
Stream channel boundaries were collected using survey grade GPS devices. Mapped features are within +/- 1 meter of ground location.



Reference Map



P:\GIS\_PROJECTS\Wheatridge\Waters\Waters\_12\_Index\_11171\_20190416.mxd





P:\GIS\_PROJECTS\NextEra\Wheatridge\MapDocs\Welland\_Delineation\_Report\NextEra\_Wheatridge\_Welland\_Delin\_Fig05\_Waters\_12k\_Index\_11171\_20190416.mxd

DSL WD # 2019-0008  
Approval Issued 4-18-2019  
Approval Expires 4-18-2024

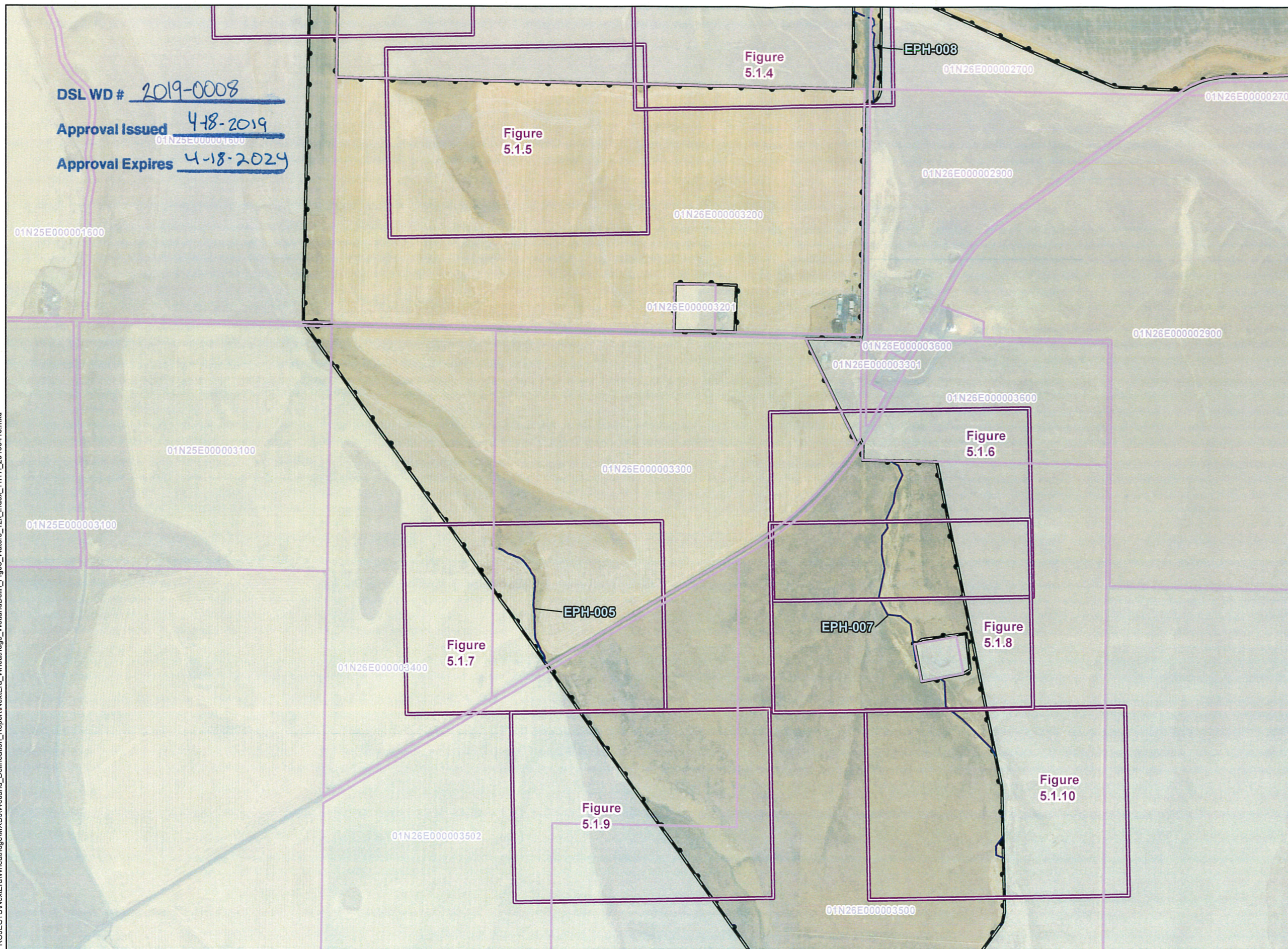


Figure 5.2  
Waters Delineation Map  
Index Map

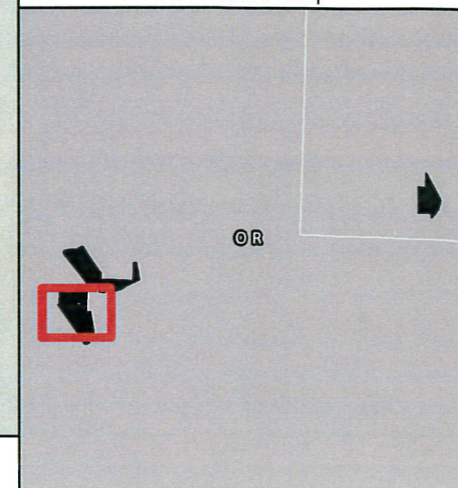
MORROW AND UMATILLA COUNTIES, OR

- Study Area
- Map Grid
- Surveyed Water (Maximum OHWL Width)
- Taxlot Boundary
- County Boundary

Stream channel boundaries were collected using survey grade GPS devices. Mapped features are within +/- 1 meter of ground location.



Reference Map










DSL WD # 2019-0008  
Approval Issued 4-18-2019  
Approval Expires 4-18-2024

**Figure 5.3  
Waters Delineation Map  
Index Map**

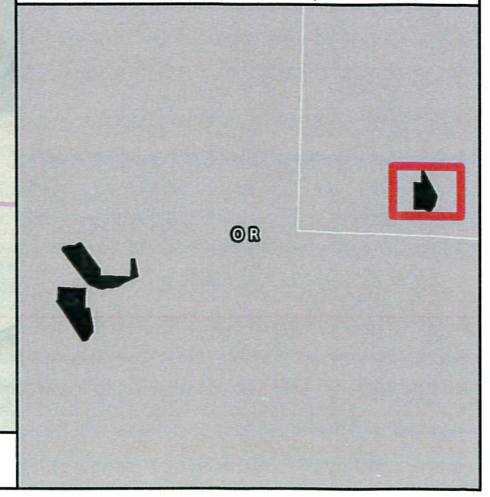
MORROW AND UMATILLA COUNTIES, OR

-  Study Area
-  Map Grid
-  Surveyed Water  
(Maximum OHWL Width)
-  Taxlot Boundary
-  County Boundary

*Stream channel boundaries were collected using survey grade GPS devices. Mapped features are within +/- 1 meter of ground location.*



Reference Map








P:\GIS\_PROJECTS\NextEra\Wheatridge\Waters\Waters\_12k\_Index\_11171\_20190416.mxd



DSL WD # 2019-0008  
Approval Issued 4-18-2019  
Approval Expires 4-18-2024

Figure 5.1.1  
Waters Delineation Map  
Detail Map

MORROW AND UMATILLA COUNTIES, OR

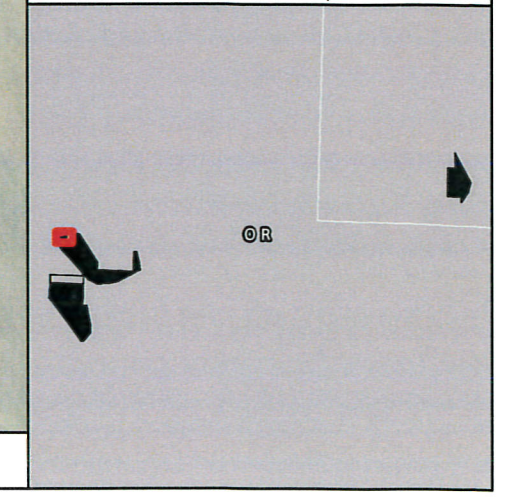
-  Study Area
-  Surveyed Water  
(Maximum OHWL Width)
-  Taxlot Boundary
-  Culvert
-  Photo Point (# Photo Number)

\*All Waters continue outside the Study Area unless otherwise noted in the legend

Stream channel boundaries were collected using survey grade GPS devices. Mapped features are within +/- 1 meter of ground location.



Reference Map



01N26E000001100

DTCH-001

01N26E000001100

XBB-003 (#8)

#7

01N26E000001102

P:\GIS\_PROJECTS\NextEra\Wheatridge\MapDocs\NextEra\_Wheatridge\_WellandDein\_Fig05\_Waters\_Detail\_withTaxlots11171\_20190327.mxd



Wheatridge  
Energy Project



Figure 5.1.2  
Waters Delineation Map  
Detail Map

MORROW AND UMATILLA COUNTIES, OR

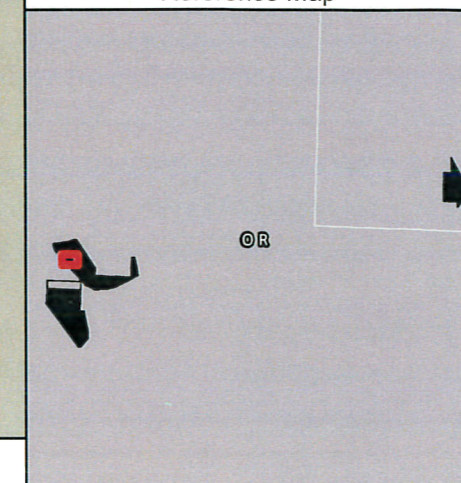
- Study Area
- Surveyed Water  
(Maximum OHWL Width)
- Taxlot Boundary
- Culvert
- Photo Point (# Photo Number)

\*All Waters continue outside the Study Area unless otherwise noted in the legend

Stream channel boundaries were collected using survey grade GPS devices. Mapped features are within +/- 1 meter of ground location.



Reference Map



FIGIS\_PROJECTS\NextEra\Wheatridge\MXDs\NextEra\_Wheatridge\_WetlandDelin\_Fig05\_Waters\_Detail\_withTaxlots11171\_20190327.mxd

DSL WD # 2019-0008  
Approval Issued 4-18-2019  
Approval Expires 4-18-2024



1:2,400 WGS 1984 UTM Zone 11N

0 125 250 500 750 1,000 Feet



DSL WD # 2019-0008  
Approval Issued 4-18-2019  
Approval Expires 4-18-2024



Figure 5.1.3  
Waters Delineation Map  
Detail Map

MORROW AND UMATILLA COUNTIES, OR

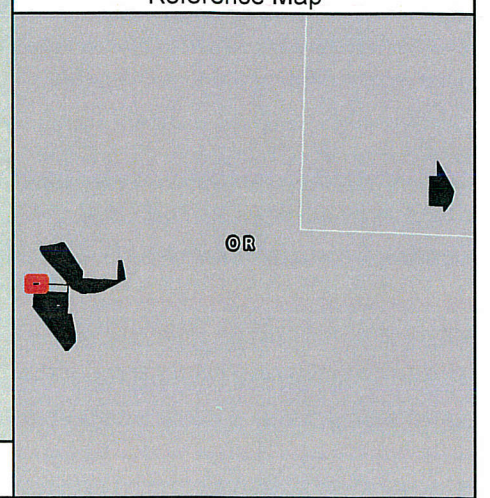
- Study Area
- Surveyed Water (Maximum OHWL Width)
- Taxlot Boundary
- Culvert
- Photo Point (# Photo Number)

\*All Waters continue outside the Study Area unless otherwise noted in the legend

Stream channel boundaries were collected using survey grade GPS devices. Mapped features are within +/- 1 meter of ground location.



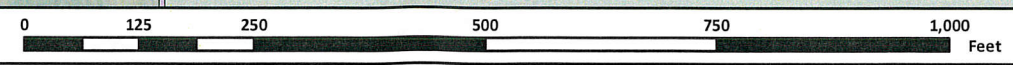
Reference Map



P:\GIS\_PROJECTS\Wheatridge\WheatridgeMXDs\NextEra\_Wheatridge\_Detail\_withTaxlots11171\_20190327.mxd



1:2,400 WGS 1984 UTM Zone 11N





P:\GIS\_PROJECTS\Wheatridge\Wheatridge\MXD\Wheatridge\_WetlandDelin\_Fig05\_Waters\_Detail\_withTaxlots11171\_20190327.mxd



DSL WD # 2019-0008  
Approval Issued 4-18-2019  
Approval Expires 4-18-2024

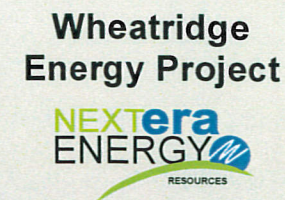


Figure 5.1.4  
Waters Delineation Map  
Detail Map

MORROW AND UMATILLA COUNTIES, OR

- Study Area
- Surveyed Water (Maximum OHWL Width)
- Taxlot Boundary
- Culvert
- Photo Point (# Photo Number)

\*All Waters continue outside the Study Area unless otherwise noted in the legend

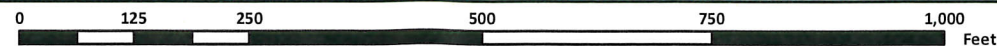
Stream channel boundaries were collected using survey grade GPS devices. Mapped features are within +/- 1 meter of ground location.



Reference Map



1:2,400 WGS 1984 UTM Zone 11N





DSL WD # 2019-0008  
Approval Issued 4-18-2019  
Approval Expires 4-18-2024



Figure 5.1.5  
Waters Delineation Map  
Detail Map






MORROW AND UMATILLA COUNTIES, OR



\\GIS\_PROJECTS\NextEra\Wheatridge\MXData\NextEra\_Wheatridge\_WetlandDelin\_Fig05\_Waters\_Detail\_withTaxlots11171\_20190327.mxd



MORROW AND UMATILLA COUNTIES, OR

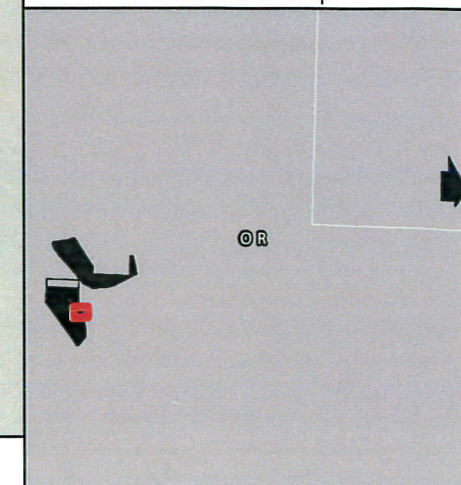
-  Study Area
-  Surveyed Water  
(Maximum OHWL Width)
-  Taxlot Boundary
-  Culvert
-  Photo Point (# Photo Number)

\*All Waters continue outside the Study Area unless otherwise noted in the legend

Stream channel boundaries were collected using survey grade GPS devices. Mapped features are within +/- 1 meter of ground location.



## Reference Map



DSL WD # 2019-0008  
Approval Issued 4-18-2019  
Approval Expires 4-18-2024

**EPH-007-**






1:2,400      WGS 1984 UTM Zone 11N



Figure 5.1.7  
Waters Delineation Map  
Detail Map

MORROW AND UMATILLA COUNTIES, OR

DSL WD # 2019-0008  
Approval Issued 4-18-2019  
Approval Expires 4-18-2024

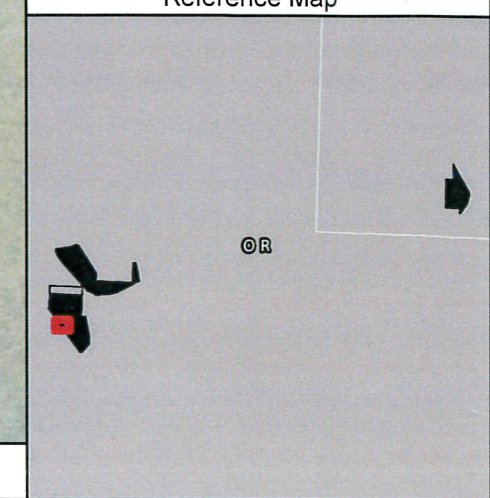
-  Study Area
-  Surveyed Water  
(Maximum OHWL Width)
-  Taxlot Boundary
-  Culvert
-  Photo Point (# Photo Number)

\*All Waters continue outside the Study Area unless otherwise noted in the legend

*Stream channel boundaries were collected using survey grade GPS devices. Mapped features are within +/- 1 meter of ground location.*



Reference Map



P:\GIS\_PROJECTS\NextEra\Wheatridge\MXDs\NextEra\_Wheatridge\_WetlandDelin\_Fig05\_Waters\_Detail\_withTaxlots1117\_20190327.mxd












**NEXTERA**  
**ENERGY**  
RESOURCES

MORROW AND UMATILLA COUNTIES, OR

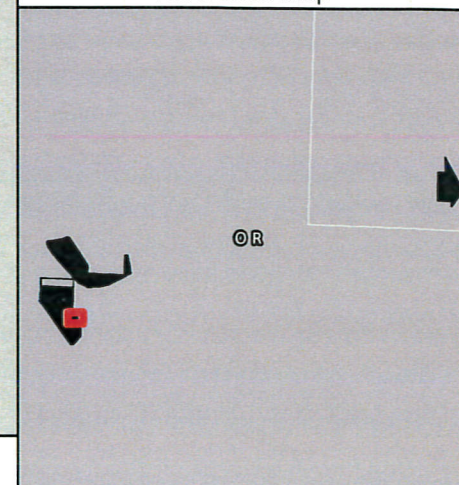
-  Study Area
-  Surveyed Water  
(Maximum OHWL Width)
-  Taxlot Boundary
-  Culvert
-  Photo Point (# Photo Number)

\*All Waters continue outside the Study Area unless otherwise noted in the legend

*Stream channel boundaries were collected using survey grade GPS devices. Mapped features are within +/- 1 meter of ground location.*



Reference Map



Approval Expires 4-18-24

EPH-007-

01N26E000003500

01N26E000003300



1:2,400      WGS 1984 UTM Zone 11N

\\GIS\PROJECTS\NextEra\Wheatridge\MXD\Waters\_Detail\_withTaxlots11171\_20190327.mxd



DSL WD # 2019-0008

Approval Issued 4-18-19

Approval Expires 4-18-24

# Wheatridge Energy Project



Figure 5.1.9  
Waters Delineation Map  
Detail Map

MORROW AND UMATILLA COUNTIES, OR

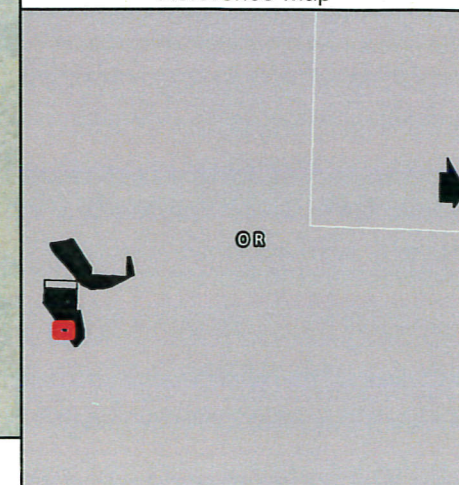
- Study Area
- Surveyed Water  
(Maximum OHWL Width)
- Taxlot Boundary
- Culvert
- Photo Point (# Photo Number)

\*All Waters continue outside the Study Area unless otherwise noted in the legend

Stream channel boundaries were collected using survey grade GPS devices. Mapped features are within +/- 1 meter of ground location.



## Reference Map



P:\GIS\_PROJECTS\Wheatridge\Wheatridge\Waters\_Detail\_withTaxlots11171\_20190327.mxd

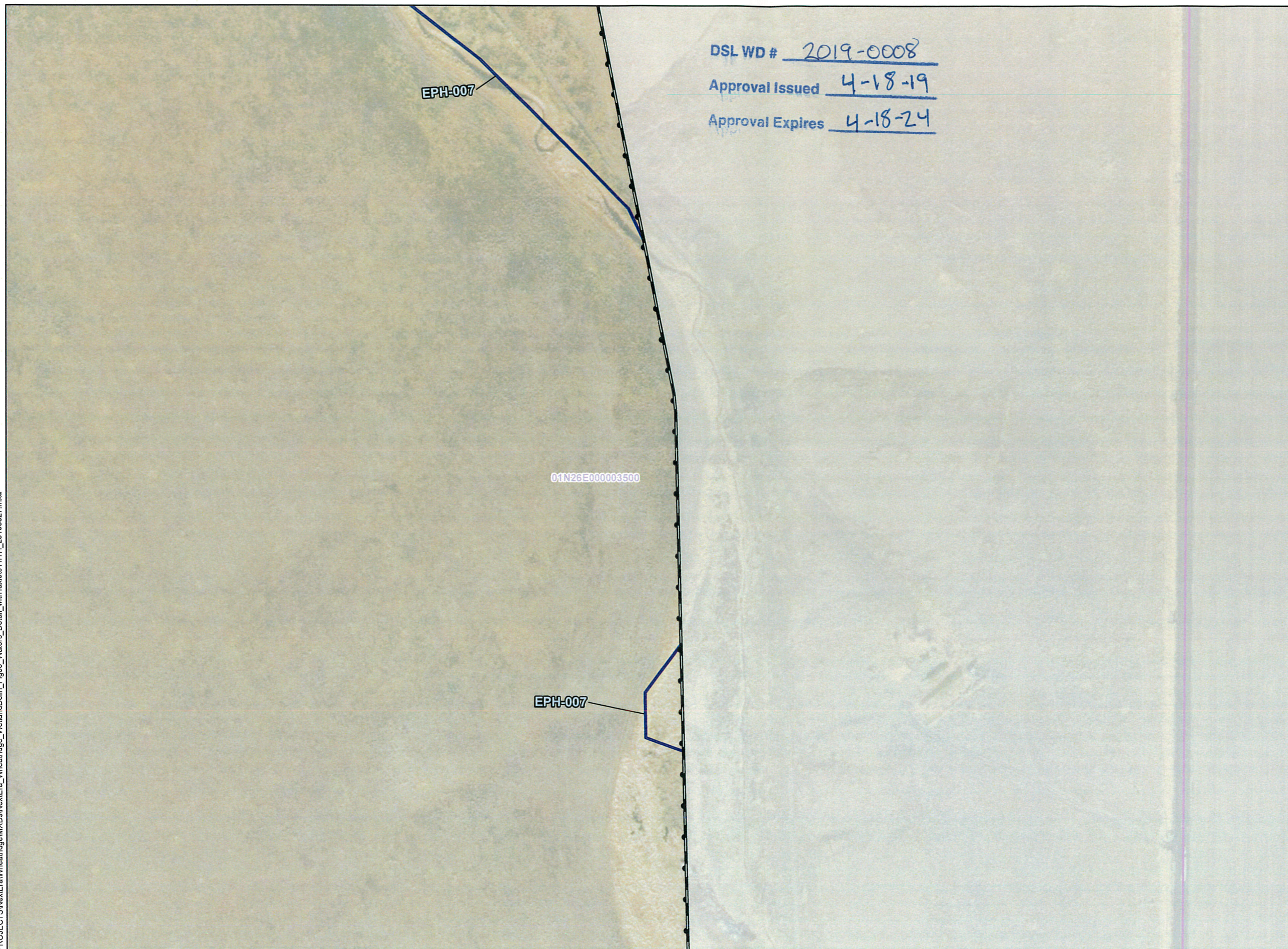


1:2,400 WGS 1984 UTM Zone 11N

0 125 250 500 750 1,000 Feet



P:\GIS\_PROJECTS\Wheatridge\WheatridgeMXD\Wheatridge\_WetlandDelin\_Fig05\_Waters\_Detail\_withTaxlots1117i\_20190327.mxd



# Wheatridge Energy Project



Figure 5.1.10  
Waters Delineation Map  
Detail Map

MORROW AND UMATILLA COUNTIES, OR

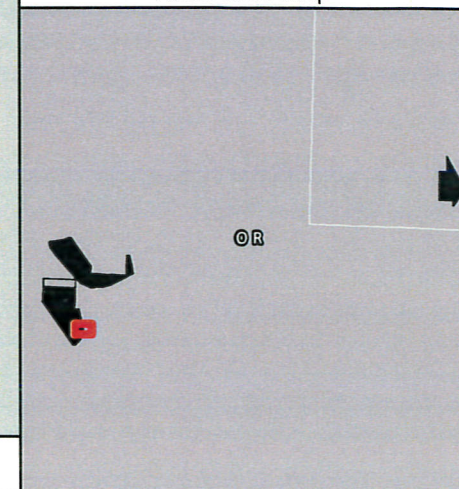
- Study Area
- Surveyed Water  
(Maximum OHWL Width)
- Taxlot Boundary
- Culvert
- Photo Point (# Photo Number)

\*All Waters continue outside the Study Area unless otherwise noted in the legend

Stream channel boundaries were collected using survey grade GPS devices. Mapped features are within +/- 1 meter of ground location.



## Reference Map



1:2,400 WGS 1984 UTM Zone 11N

0 125 250 500 750 1,000 Feet



DSL WD # 2019-0008  
Approval Issued 4-18-19  
Approval Expires 4-18-24



Figure 5.1.11  
Waters Delineation Map  
Detail Map

MORROW AND UMATILLA COUNTIES, OR

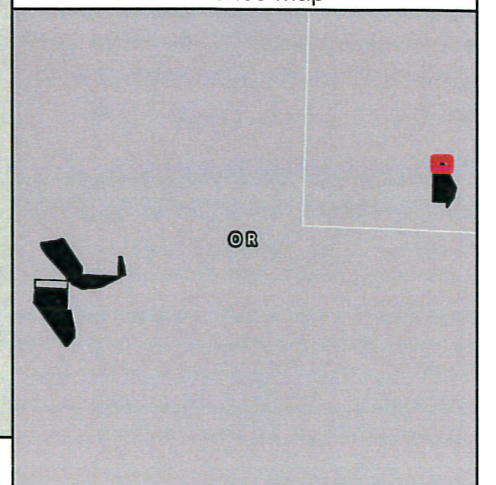
- Study Area
- Surveyed Water  
(Maximum OHWL Width)
- Taxlot Boundary
- Culvert
- Photo Point (# Photo Number)

\*All Waters continue outside the Study Area unless otherwise noted in the legend

Stream channel boundaries were collected using survey grade GPS devices. Mapped features are within +/- 1 meter of ground location.



Reference Map



XBB-002 (#2)

#3

EPH-001



1:2,400 WGS 1984 UTM Zone 11N

0 125 250 500 750 1,000 Feet



P:\GIS\_PROJECTS\NexEra\Wheatridge\MapDocs\NexEra\_Wheatridge\_Detail\_withTaxlots11171\_20190327.mxd



# Wheatridge Energy Project



Figure 5.1.12  
Waters Delineation Map  
Detail Map

MORROW AND UMATILLA COUNTIES, OR

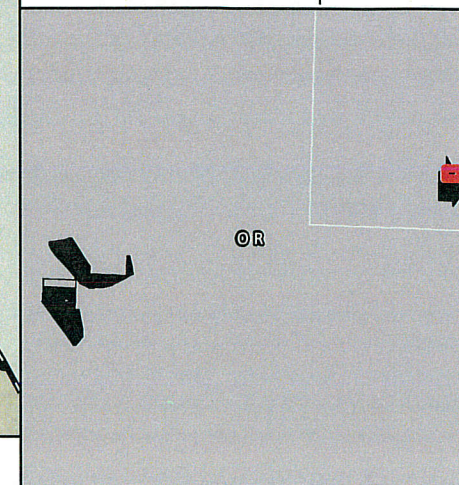
- Study Area
- Surveyed Water  
(Maximum OHWL Width)
- Taxlot Boundary
- Culvert
- Photo Point (# Photo Number)

\*All Waters continue outside the Study Area unless otherwise noted in the legend

Stream channel boundaries were collected using survey grade GPS devices. Mapped features are within +/- 1 meter of ground location.



## Reference Map





P:\GIS\_PROJECTS\NextEra\Wheatridge\MXD\NextEra\_Wheatridge\_WellandDelin\_Fig05\_Waters\_Detail\_withTaxlots1117\_20190327.mxd



DSL WD # 2019-0008  
Approval Issued 4-18-19  
Approval Expires 4-18-24



Figure 5.1.13  
Waters Delineation Map  
Detail Map

MORROW AND UMATILLA COUNTIES, OR

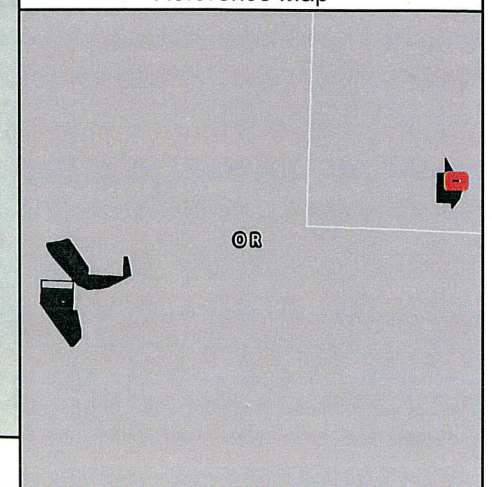
- Study Area
- Surveyed Water  
(Maximum OHWL Width)
- Taxlot Boundary
- Culvert
- Photo Point (# Photo Number)

\*All Waters continue outside the Study Area unless otherwise noted in the legend

Stream channel boundaries were collected using survey grade GPS devices. Mapped features are within +/- 1 meter of ground location.



Reference Map



1:2,400 WGS 1984 UTM Zone 11N

0 125 250 500 750 1,000 Feet



## **ESTERSON Sarah \* ODOE**

---

**From:** Carla McLane <cmclane@co.morrow.or.us>  
**Sent:** Wednesday, February 20, 2019 4:54 PM  
**To:** ESTERSON Sarah \* ODOE  
**Cc:** 'Marshall, Jesse'; 'Pappalardo, Mike'; RUSSELL Don; Jim Doherty; Melissa Lindsay; Darrell Green; Roberta Lutcher; Matt Scrivner; Sandra Pointer  
**Subject:** [Fortimail Spam Detected] Wheatridge pRFA4 Morrow County Comment  
**Attachments:** RFA4 Comment letter 02212019 signed.pdf

Sarah,  
Please see comment from Morrow County on the pRFA4 for the Wheatridge project.  
Let me know if you have any questions.

Safe travels to the EFSC meeting later this week.  
Carla

Carla McLane, MBA  
Morrow County Planning Director  
205 Third Street NE  
Post Office Box 40  
Irrigon, Oregon 97844  
541-922-4624  
[cmclane@co.morrow.or.us](mailto:cmclane@co.morrow.or.us)



## PLANNING DEPARTMENT

PO Box 40 • 205 Third Street NE  
Irrigon, Oregon 97844  
(541) 922-4624

February 21, 2019

Sarah Esterson, Senior Siting Analyst  
Oregon Department of Energy  
550 Capitol Street NE, 1<sup>st</sup> Floor  
Salem, OR 97301

RE: Wheatridge Wind Energy Facility - Request for Amendment 4

Dear Ms. Esterson:

The following comments are on behalf of the Morrow County Board of Commissioners serving as a Special Advisory Group for this project. The purpose of this letter is to address the preliminary Request for Amendment (pRFA4) which is a request to amend the site boundary, extend the construction commencement deadline to December 31, 2023, and to construct and operate the following additional components: 150 MW photovoltaic solar energy system, distributed energy storage system sites, and expansion of a previously approved substation.

Morrow County has reviewed the applicant's submitted materials for a Type A review, and while a number of errors or omissions have been identified (please see the listing at the conclusion of this letter), there are no glaring concerns or problems with the application. Most of the previously approved Conditions continue to be applicable and would not change based on the proposed additional system components. The Morrow County Solid Waste Management Plan and Ordinance continue to be applicable as discussed during the previous amendment process and should be reviewed in Exhibit V Solid Waste and Wastewater. Morrow County would request either a new or revised condition to address disposal of the photovoltaic components.

The County would support the type of installation the application describes in Exhibit B under 2.1 Photovoltaic Modules and Racking, specifically installation without concrete foundations. The reason for supporting this type of installation is related to the nature of the Goal 3 Exception proposed in Exhibit K, allowing for the Exception to be removed at the end of the projects life. If there are concrete foundations, both removal of the Exception and reclamation of the land could be significantly negatively impacted.

Concerns continue related to how Exceptions are taken by the Energy Facility Siting Council without a clear mechanism for those same Exceptions to be incorporated into local Comprehensive Plans. In this instance the applicant is suggesting a Condition that they be responsible for removing the Exception at the conclusion of the project, but there is no mention as to how that Exception will be incorporated to begin with.

Should the Energy Facility Siting Council (EFSC) approve this amendment the applicant needs to make application to amend the Morrow County issued Conditional Use Permit (CUP)

Wheatridge Wind Energy Facility  
Request for Amendment 3

February 21, 2019  
Page 1 of 2

specifically addressing these changes. Without an amendment to the local CUP there will be inconsistencies between the EFSC Site Certificate and the local CUP.

The opportunity to comment is much appreciated. It has been a pleasure working with you and other Department staff to date, and I anticipate that will continue. Should you have any questions about this comment letter, previous comment letters, or need additional information, please do not hesitate to contact me.

Cordially,



Carla McLane  
Planning Director

cc: Jesse Marshall, NextERA  
Mike Pappalardo, NextERA  
Morrow County Board of Commissioners  
Matt Scrivner and Sandra Putnam, Morrow County Public Works

Comment to pRFA4  
Wheatridge Energy Facility

Page	Concern, error or omission
Exhibit L Table L-1	Quesnal Park is not listed; it is located north and west of the Tower Road Interchange and is owned and operated by the ACOE
Exhibit V	<p>The Morrow County Solid Waste Management Plan and Ordinance would be applicable.</p> <p>Conditions applied during previous amendments concerning disposal of battery waste are applicable.</p> <p>Additional Condition should be applied that would be similarly worded concerning disposal of the photovoltaic panels.</p>
Exhibit K	<p>Proximity to other solar facilities: Morrow County has approved the HARP facility, however it is approximately three miles from this proposed development.</p> <p>Reference to UEC is stated as Umatilla Energy Commission. It is actually Umatilla Electric Cooperative. (this reappears several times)</p>
Exhibit S Table S-2	Both Bombing Range Road and Strawberry Lane are identified as ODOT ownership; both are county roads.

**Attachment C: Draft Proposed Order Comment Index and Comments**



### Draft Proposed Order Comment Index

Date Received	Commenter Name	Organization	Issue Evaluation (Council Standard)
07/31/2019	Jordan Brown	Oregon Department of Agriculture	Non-substantive comment
08/08/2019	Gary Kahn	Friends of the Columbia Gorge, Northwest Environmental Defense Center, Oregon Natural Desert Association, Oregon Wild, Thrive Hood River, Columbia Riverkeeper, WildLands Defense, Greater Hells Canyon Council, Oregon Coast Alliance (Friends et al)	Oregon Administrative Rule (OAR) 345 Division 27 (Procedural)
08/27/2019	Steve Cherry	Oregon Department of Fish and Wildlife (ODFW)	OAR 345-022-0060 (Fish and Wildlife Habitat)
09/05/2019	Teara Farrow Ferman	Confederated Tribes of Umatilla Indian Reservation (CTUIR)	OAR 345-022-0090 (Cultural, Historic, and Archeological Resources)
09/06/2019	Christian Nauer	Confederated Tribes of the Warm Springs Reservation of Oregon (CTWS)	OAR 345-022-0090 (Cultural, Historic, and Archeological Resources)
09/06/2019	Carla McLane	Morrow County Board of Commissioners/Special Advisory Group	OAR 345-022-0030 (Land Use) OAR 345-022-0050 (Retirement and Financial Assurance)
09/09/2019	Irene Gilbert	Public	OAR 345 Division 27 (Procedural) OAR 345-022-0030 (Land Use) OAR 345-022-0060 (Fish and Wildlife Habitat)
09/09/2019	Jesse Marshall	Certificate Holder (NextEra Energy Resources)	OAR 345-022-0090 (Cultural, Historic, and Archeological Resources) OAR 345-022-0030 (Land Use) OAR 345-022-0050 (Retirement and Financial Assurance)

## ESTERSON Sarah \* ODOE

---

**From:** Jordan Brown <brownj@science.oregonstate.edu>  
**Sent:** Wednesday, July 31, 2019 12:02 PM  
**To:** ESTERSON Sarah \* ODOE  
**Subject:** Re: Wheatridge Wind Energy Facility: Notice of Request for Amendment 4 of the Site Certificate, Draft Proposed Order and Public Hearing - August 22, 2019 Hearing; Comment Deadline is September 9, 2019

Hello Sarah,  
I'm sorry to say that due to recent funding cuts I'm unable to review this project amendment and provide comments.

If you have further concerns or issues relating to Threatened and Endangered plants in Oregon, or would like further clarification on why I'm unable to assist you, please contact my Manager, Tim Butler (503-986-4625, [tbutler@oda.state.or.us](mailto:tbutler@oda.state.or.us)), Division Manager, Helmuth Rogg (503-986-4662, [hrogg@oda.state.or.us](mailto:hrogg@oda.state.or.us)), or Assistant Director of the Department of Agriculture, Lauren Henderson (503-986-4588, [lhenderson@oda.state.or.us](mailto:lhenderson@oda.state.or.us)).

Quoting ESTERSON Sarah \* ODOE <[Sarah.Esterson@oregon.gov](mailto:Sarah.Esterson@oregon.gov)>:

Good afternoon,

On July 1, 2019 the Oregon Energy Facility Siting Council (Council) and the Oregon Department of Energy (Department) received a complete Request for Amendment 4 of the Wheatridge Wind Energy Facility site certificate (RFA4). On July 25, 2019, the Department issued its Draft Proposed Order presenting recommended findings of fact related to Council standards at OAR Chapter 345 Divisions 22-24.

### Background

The Wheatridge Wind Energy Facility is an approved wind energy generation facility to be located in Morrow and Umatilla counties. The facility has not been constructed, but has been previously approved by Council for construction and operation of up to 292 wind turbines, with a peak generating capacity of up to 500 megawatts (MW) of electricity.

### Summary of the amendment request

RFA4 seeks Council approval to amend its site certificate to add 1,527 acres to the site boundary, within Morrow County, for construction and operation of two solar arrays with a generating capacity up to 150 megawatts (MW) comprised of solar modules, tracker systems, posts and related electrical equipment; and, up to 41 energy storage (battery) system sites distributed throughout the proposed solar arrays. RFA4 also seeks to amend site certificate conditions.

### Attachments

Public Notice on Request for Comments on the Complete RFA4 and Draft Proposed Order, and Notice on the Draft Proposed Order Public Hearing is attached for your reference.

RFA4, draft proposed order and public notice are available on the Department's project website at: <https://www.oregon.gov/energy/facilities-safety/facilities/Pages/WRW.aspx>

Comment Deadline

Written comments on RFA4 and the draft proposed order must be received by the Department by September 9, 2019, 18-days following the August 22, 2019 public hearing. Comments on the amendment request and the draft proposed order must be submitted in writing by mail, **email, hand-delivery or fax per below:**

Sarah Esterson, Senior Siting Analyst  
Oregon Department of Energy  
550 Capitol Street NE, 1<sup>st</sup> Floor  
Salem, OR 97301  
Email: [sarah.esterson@oregon.gov](mailto:sarah.esterson@oregon.gov)

Fax: 503-373-7806

Thank you and please do not hesitate to contact me with any questions.

-Sarah



**Sarah T. Esterson**

Senior Siting Analyst  
550 Capitol St. NE | Salem, OR 97301  
P: 503-373-7945

C: 503-385-6128  
P (In Oregon): 800-221-8035



Stay connected!



Jordan Brown  
Conservation Biologist  
OR Department of Agriculture  
Native Plant Conservation Program  
Oregon State University, Dept. of Botany  
Cordley 2082  
Corvallis, OR 97331  
office: (541)-737-2346  
cell: (541)-224-2245



**ESTERSON Sarah \* ODOE**

---

**From:** Gary Kahn <gkahn@rke-law.com>  
**Sent:** Thursday, August 8, 2019 2:22 PM  
**To:** ESTERSON Sarah \* ODOE  
**Cc:** Jesse.marshall@nee.com  
**Subject:** Wheatridge Wind Energy Facility – Proposed Amendment #4

To Whom It May Concern:

I am writing on behalf of Friends of the Columbia Gorge, Northwest Environmental Defense Center, Oregon Natural Desert Association, Oregon Wild, Thrive Hood River, Columbia Riverkeeper, WildLands Defense, Greater Hells Canyon Council, and Oregon Coast Alliance regarding the above-referenced matter.

On August 1, 2019, the Oregon Supreme Court held that the rules under which this application was submitted are invalid. Because this application was submitted pursuant to invalid rules, the application is likewise invalid and cannot be processed by ODOE nor approved by EFSC.

Nor can this application be retroactively processed under rules that were not in effect at the time the application was submitted, nor under rules that might be adopted at a later date. Again, this application was expressly submitted pursuant to invalid rules. To begin processing this application under a completely different set of rules mid-stream would be unlawful and would prejudice the substantial rights and interests of my clients and the general public. If the applicant wishes to proceed, it has the option of filing a new application at any time.

Please confirm that the application will not be processed any further.

Thank you very much for your time and consideration.

Gary K. Kahn

--

Gary K. Kahn  
Reeves, Kahn, Hennessy & Elkins  
4035 S.E. 52nd Avenue  
P.O. Box 86100  
Portland, OR 97286  
Tel: (503) 777-5473  
Fax: (503) 777-8566  
Email: [gkahn@rke-law.com](mailto:gkahn@rke-law.com)

## MEMORANDUM

---

TO: Sarah Esterson  
Oregon Department of Energy

FROM: Steve Cherry, District Wildlife Biologist  
Oregon Department of Fish and Wildlife  
PO Box 363 Heppner, OR 97836  
(541) 676-5230  
[Steve.p.cherry@state.or.us](mailto:Steve.p.cherry@state.or.us)

DATE: August 27, 2019

RE: Oregon Department of Fish and Wildlife (ODFW) Comments the Draft Proposed Order (DPO) for Amendment 4 for the Wheatridge Wind Energy Facility

---

GENERAL COMMENTS: ODFW appreciates the opportunity to review this project according to the Energy Facility Siting Standard for Fish and Wildlife Habitat, as well as the Threatened and Endangered Species Standard.

ODFW recognizes that the proposed amendment adds 1,527 acres to the site boundary to construct two solar arrays and up to 41 energy storage sites. ODFW has worked with ODOE and the Applicant to address wildlife issues associated with this amendment and appreciates the Applicant addressing ODFW's concerns about wildlife impacts due to the facility and working with ODFW to avoid, minimize and mitigate for the potential impacts.

SPECIFIC COMMENTS: The DPO shows that temporary impacts to Category 2 habitat are mitigated at >1:1 ratio and that permanent impacts to Category 2 are mitigated at a 2:1 ratio. The impacts table in the DPO shows that the impacts are mitigated at 2:1 for permanent impacts and 1:1 for temporary impacts. If the temporary impacts are in grasslands or shrub steppe without a sagebrush component, a 1:1 ratio is adequate. However if the impacts are in a sage dominated shrub steppe habitat ODFW would recommend that the temporary impacts be mitigated at a 2:1 ratio since it will take a very long time for the sage component to return and provide the wildlife value it provided preconstruction.

ODFW has no further comments on this amendment at this time. Please contact Steve Cherry (District Wildlife Biologist) or Sarah Reif (Energy Coordinator) with any questions.



**Confederated Tribes of the  
Umatilla Indian Reservation**

**Department of Natural Resources**

46411 Timine Way, Pendleton, Oregon 97801

## MEMORANDUM

To: Sarah Esterson, Senior Siting Analyst  
Oregon Department of Energy  
Sent via email to: Sarah.Esterson@oregon.gov

From: Teara Farrow Ferman, Cultural Resources Protection Program Manager  
Confederated Tribes of the Umatilla Indian Reservation *TEARA FARROW FERMAN*  
46411 Timine Way, Pendleton, OR 97801  
TearaFarrow Ferman@ctuir.org  
541-276-3447

Date: September 5, 2019

RE: Confederated Tribes of the Umatilla Indian Reservation's Comments on the Wheatridge Wind Energy Facility Request for Comment on Request for Amendment 4 and Draft Proposed Order

General Comments:

Thank you for contacting the Confederated Tribes of the Umatilla Indian Reservation (CTUIR) regarding the Wheatridge Wind Energy Facility Request for Comment on Request for Amendment 4 and Draft Proposed Order. The CTUIR offers the following comments for the project.

Specific Comments:

The locations of the proposed facilities described in the Request for Amendment 4 along with the other areas of this proposed project should have a traditional use survey completed for the project areas. In previous phases of the Wheatridge project, the CRPP has recommended that the project have a cultural resource monitor present during ground disturbing construction. This is also our recommendation for this portion of the project as well.

## ESTERSON Sarah \* ODOE

---

**From:** Christian Nauer <christian.nauer@ctwsbnr.org>  
**Sent:** Friday, September 6, 2019 12:08 PM  
**To:** ESTERSON Sarah \* ODOE  
**Cc:** Robert Brunoe  
**Subject:** Re: Wheatridge Wind Energy Facility: Notice of Request for Amendment 4 of the Site Certificate, Draft Proposed Order and Public Hearing - August 22, 2019 Hearing; Comment Deadline is September 9, 2019  
**Attachments:** PastedGraphic-1.pdf

Hi Sarah,

Thank you very much for the opportunity to provide comment on the Wheatridge Wind Energy Facility Notice of Request for Amendment 4 of the Site Certificate.

### General Comment:

As the technical reviewer for NHPA Section 106 and other cultural resource issues for the Confederated Tribes of the Warm Springs Reservation of Oregon (CTWSRO), the CTWSRO Tribal Historic Preservation Office (THPO) has concerns with the potential effects to historic properties or cultural resources within the Project Area of Potential Effects (APE). The Project APE is within the areas of concern for the CTWSRO.

### Project-specific Comment(s):

This office recommends that if the proposed boundary expansion of the Project APE has not been surveyed for historic properties and cultural resources, then additional identification efforts will need to be undertaken.

Thank you for your efforts to protect cultural resources.

Best Regards,

Christian

Christian Nauer, MS  
Archaeologist  
Confederated Tribes of the Warm Springs Reservation of Oregon  
Branch of Natural Resources

[christian.nauer@ctwsbnr.org](mailto:christian.nauer@ctwsbnr.org)

Office 541.553.2026

Cell 541.420.2758

### Standard Disclaimers:

\*The Confederated Tribes of the Warm Springs Reservation of Oregon have reserved treaty rights in Ceded Lands, as well as Usual and Accustomed and Aboriginal Areas, as set forth through the Treaty with the Middle Tribes of Oregon, June 25, 1855.



\*Please know that review by the Tribal Historic Preservation Office does not constitute Government-to-Government consultation. Please ensure that appropriate Government-to-Government consultation is made with the Confederated Tribes of the Warm Springs Tribal Council.

On Jul 29, 2019, at 3:58 PM, ESTERSON Sarah \* ODOE <[Sarah.Esterson@oregon.gov](mailto:Sarah.Esterson@oregon.gov)> wrote:

<WRWAMD4 DPO Public Notice 2019-07-25.pdf>



## PLANNING DEPARTMENT

PO Box 40 • 205 Third Street NE  
Irrigon, Oregon 97844  
(541) 922-4624

September 9, 2019

Sarah Esterson, Senior Siting Analyst  
Oregon Department of Energy  
550 Capitol Street NE, 1<sup>st</sup> Floor  
Salem, OR 97301

Dear Ms. Esterson. *SARAH*

The following comments are on behalf of the Morrow County Board of Commissioners serving as a Special Advisory Group for the Wheatridge Wind Energy Facility. The purpose of this letter is to address the Draft Proposed Order related to Request for Amendment 4 (RFA4), which is a request to amend the site boundary, extend the construction commencement deadline, and to construct and operate the following additional components: 150 MW photovoltaic solar energy system, distributed energy storage system sites, and expansion of a previously approved substation.

Morrow County has reviewed the Oregon Department of Energy's Draft Proposed Order (DPO), and a list of several minor errors have been identified and listed at the conclusion of this letter. The balance of this letter addresses identified concerns or omissions within the DPO.

Land Use Condition 1 is proposed to be amended to address setback requirements. Morrow County would not require the fence to meet the established setback, just facility components. The fence could be placed on the project boundary. The exception would be the installation along roads would need to meet sight distance requirements, and therefore may need to be set back more than the established set back. Morrow County would recommend that the final setback be established as part of the issuance of the local Zoning Permit to allow evaluation of the permitted point of access and appropriate setback for the fencing.

On page 43, lines 32-40, is a discussion of access points. The Departments analysis indicates that no access roads will intersect, however the proposed solar facility will require access from one or more county roads. Morrow County would require an Access Permit for each of those access points. Additionally crossing and work in right-of-way permits will also be required.

On page 45, lines 30-34, there is discussion of the proposed 7- to 8-foot fence. Morrow County requires any fencing 6-feet or higher in height to be treated as a structure with a requirement that a Zoning Permit, and in some instances a Building Permit, be obtained.

As part of the Goal 3 Exceptions discussion on pages 62 through 64 at one-point Department staff dismiss acreage as a justification for the 'reasons' goal exception, but then use that same acreage argument, or statement of facts, as part of the discussion of socioeconomic impacts. That seems inconsistent; if appropriate for the socioeconomic discussion it should be equally valid for the 'reasons' goal exception.

During review of the document it became clear that the applicant has identified a construction standard that would place the solar panels on foundations that could be as deep as 8-feet. While the application indicates their preference is not to have foundations, there is a recognition that they may be required to support the type of solar panels being installed. A concern with this type of installation are the resulting reclamation requirements. The discussion of restoration begins on page 74 and indicates that foundations would be completely removed with underground collector lines at depths of 3-feet or greater being the only components to be abandoned in place.

Current activity on the proposed solar site is dryland wheat farming. Current understanding of crop depth for wheat is 6-feet (based on conversation with Larry Lutchter, OSU Extension Crop Scientist). So any components remaining to that depth could impact future crop growth and development. Morrow County would like to see a condition added as part of the Retirement Conditions that does more than require a retirement plan, but puts in place new standards for removal of the foundations and other solar facility components to at least 6-feet with a clarifier that would seek further expertise on farming practices at the time of retirement.

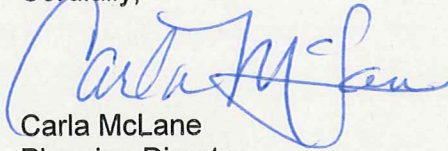
There are a number of conditions that are currently being completed by the applicant as they are moving towards construction of the wind energy facility. Those same conditions will need to be applied once again for the solar component of the energy facility, but it is unclear in the draft Fourth Amended Site Certificate that those same conditions will once again be applicable. What does the Department suggest, or how will those same conditions, be reapplied? Morrow County would like to seek clarity on how the Department will manage future compliance for any condition that will be applicable to multiple portions of this project constructed on differing time lines. An example would be that the applicant has obtained their local Conditional Use Permit for the wind energy component of the project up to and including the third amendment. The applicant will also need to obtain an amendment to that same Conditional Use Permit at the conclusion of the fourth amendment. Without such an amendment there will be inconsistencies between the Site Certificate and the local Conditional Use Permit.

Concerns continue related to how Exceptions are taken by the Energy Facility Siting Council without a clear mechanism for those same Exceptions to be incorporated into local Comprehensive Plans. In this instance the applicant had suggested a Condition that they be responsible for removing the Exception at the conclusion of the project. It does not appear that Department staff have incorporated that Condition, nor is there a defined path for the County to incorporate the Goal 3 Exception into the Morrow County Comprehensive Plan. Both activities should be conditioned, with the applicant having responsibility to assure those steps are taken.



The opportunity to comment is much appreciated. It has been a pleasure working with you and other Department staff to date, and I anticipate that will continue. Should you have any questions about this comment letter, previous comment letters, or need additional information, please do not hesitate to contact me.

Cordially,



Carla McLane  
Planning Director

cc: Jesse Marshall and Mike Pappalardo, NextERA  
Morrow County Board of Commissioners  
Matt Scrivner and Sandra Pointer, Morrow County Public Works  
Larry Lutchter, Oregon State University

Comment to the Draft Proposed Order for the Wheatridge Energy Facility

Page	Concern, error or omission
21, line 10	The reference to Gilliam County should probably be Morrow County.
62, line 34	The word "be" needs to be added prior to "permanent."
63, line 28-29	This appears to be a partial sentence.
63, line 39-40	This appears to be a partial sentence.
64, line 9	The word "of" needs to be added between implementation and existing.
120, line 32	The word "approved" needs to be added between previously and wind.



**ESTERSON Sarah \* ODOE**

---

**From:** Irene Gilbert <ott.irene@frontier.com>  
**Sent:** Monday, September 9, 2019 4:56 PM  
**To:** ESTERSON Sarah \* ODOE; ESTERSON Sarah \* ODOE; CORNETT Todd \* ODOE  
**Subject:** Comments on Wheatridge Wind Amendment 4  
**Attachments:** Wheatridge comment One.docx

Attached are my comments on the above application.

Sarah Esterson, Senior Siting Analyst

Oregon Department of Energy

550 Capitol Street NE, 1<sup>st</sup> Floor

Salem, OR 97301

Email: [sarah.esterson@oregon.gov](mailto:sarah.esterson@oregon.gov)

## COMMENT REGARDING THE REQUEST FOR AMENDMENT 4 BY THE Wheatridge Wind Energy Facility

Issue One;

I object to the restriction listed on Page 11, starting on Line 37 stating that all evidence that the person may want to cite or include in a request for contested case proceeding must be included in comments provided on the record of the draft proposed order.. This restriction is not consistent with the statute or the Administrative Rule cited in the draft proposed order. ORS 469.370(3) states, “Any issue that may be the basis for a contested case shall be raised not later than the close of the record at or following the final public hearing prior to issuance of the department’s proposed order. Such issues shall be raised with sufficient specificity to afford the council, the department and the applicant an adequate opportunity to respond to each issue.”

OAR 345-067-0067(5)(b) states, “A person who intends to raise an issue that may be the basis for granting a contested case proceeding must raise that issue on the record of the public hearing with sufficient specificity to afford the Council, the department and the certificate holder an adequate opportunity to respond to the issue.. To raise an issue with sufficient specificity, a person must present facts, on the record of the public hearing that support the person’s position on the issue.”

Note that neither the statute or the administrative rule refer to anything other than the close of the comment period and there is no reference to how the comments effect the contested case request with the exception of indicating the above language regarding the need to have raised it with “sufficient specificity.”

While there is no doubt that the Oregon Department of Energy and Energy Facility Siting Council will deny any contested case request based upon these comments, I want this request in it’s entirety included on the record for documentation purposes.

I have been denied multiple contested case requests on amended site certificates during the past 8 years, and the reasons have changed time and again. The department has developed a reputation as was stated by one of the attorneys testifying before the Legislative Committee charged with attempting to “fix” the siting process that what is being run is a “Kangaroo Court”. Given that the department and the council have never allowed even one contested case on an amended solar or wind development since the department was formed, it seems that reputation is well earned.

In order to place this comment in perspective, the following applies:

When I first submitted a contested case request, the response was that the request did not provide any new information that had not been submitted with my comments and those comments had already been considered. DENIED

I then attempted to include additional information that supported the need for the contested case. The response was DENIED

Then I added even more information in the contested case request to the point that I argued that the department and the council were requiring me to include all my arguments and documents in the contested case request which should not be required until the contested case hearing. The department and council were basically determining the outcome of the hearing based upon the request and determining that they did not agree with my arguments. DENIED

Now the department has decided to read into the statute requirements which are not in the plain language of the statute (nothing is supposed to be added that isn't there) and limit the contested case request to the information provided in the comments. I have now received a response that my contested case request related to a new issue because I included additional statutes supporting the fact that the agency was not acting in compliance with the statutes and rules. DENIED

Since the department has a history of doing what they want absent any rule or statute change and then changing their rules to be consistent with what they have been doing and calling it "housekeeping", I can predict the future plans to amend the rules to make them inconsistent with the statute and hope that no one takes them to court for their actions.

Since the draft proposed order references the above administrative rule and interprets it in a manner that conflicts with the Oregon Statute, any decisions made regarding future requests for a contested case which limit the listing of related rules, statutes, or documents supporting the original issue brought up in public comments will be in conflict with ORS 469.370. Per ODOE and EFSC rules and the Oregon law, the department cannot overrule state statutes. The proposed order needs to remove the information regarding the restriction of information submitted as a part of a contested case request to only those documents and statutes referenced in public comments.

Comment Issue Number Two:

The previous information regarding Issue Number One also apply to this comment:

There is no basis in state statute, ODOE administrative rules, Administrative rules of other state agencies or the model rules where there is any requirement that the public identify statutes or rules which apply to a comment or contested case request. This is an arbitrary requirement that is being imposed upon the lay people attempting to have a voice in the siting of energy developments in Oregon. It can only be interpreted as yet another requirement intended to block the public from being able to access the contested case procedure. Absent the identification of a statute or rule requiring the public to correctly identify ODOE administrative rules specific to any given comment, this requirement needs to be removed from the draft proposed order prior to issuing it as a "proposed order".

Comment Issue Number Three:

The Oregon Department of Energy and Energy Facility Siting Counsel are required to honor state statutes and do not have the authority to overrule Statutes that may conflict with their rules.

Since there is a conflict between what ODOE is requiring and the statute, I am referencing the statute as the standard that must be met. ORS 569.390 requires the owner or occupant to eradicate weeds. This statute requires that noxious weeds be destroyed or prevented from seeding. This statute applies for the life of the development. A site certificate condition needs to be added requiring the developer to identify noxious weeds at their site, and when they typically produce seeds. The developer then needs to develop a monitoring and treatment timeframe that will keep the weeds from going to seed. In addition, ORS 469.507 requires a monitoring program that extends for the life of the development. The draft Proposed Order does not include a monitoring program that assures that noxious weed seeds will not be allowed to develop during the years when no monitoring or treatment is being required.

Comment Issue Number Four:

This comment is related to Comment 3 and the comments above should be looked at cumulatively. “machinery which may be infected with noxious weed seeds must be cleaned prior to traveling over public roads or from one farm to another”. The site certificate needs to require compliance with ORS 569.390 and ORS 569.445 at a minimum. A site certificate condition needs to be added requiring this cleaning of equipment used in areas with different land owners.

Comment Issues Number Five:

The draft proposed order fails to provide protection for federally protected bird habitats. The nest sites for these birds are considered Category 1 habitat. The DPO ignores the requirement in OAR 635-415-0025 that there be no direct or indirect impacts to Category 1 habitat by completely ignoring at risk bird species in the list of sensitive species and required setbacks from nests. The draft proposed order needs to include setbacks from buto hawks, peregrine falcon, bald eagle, burrowing owl. Golden Eagles (setbacks need to be a minimum of ½ mile from nest site per previous site certificate requirements and ODFW recommendations on previous developments), and any other federal threatened or endangered raptor species. Per the previously submitted memo from Oregon Legislative Council to Greg Barreto regarding the failure to address federally listed threatened and endangered wildlife under the T & E standard, the Oregon Department of Energy and Energy Facility Siting Council must address them under the habitat standard. This site certificate fails to do that which puts the agency out of compliance with the federal rules.

Any exceptions to the setback requirements for times when nests are not occupied are not legitimate. The nest sites remain Category 1 during the times the birds are not physically present or hatching young. Raptors return to the same nest sites year after year, and the action of destroying or building structures within the setback areas does not provide protection from direct or indirect impacts. Displacement of protected species is not allowed under the Endangered Species Act, and taking action that requires the birds to move to other habitat that may not provide the same quality is illegal.

Irene Gilbert

2310 Adams Ave.



La Grande, Oregon 97850

Email: [ott.irene@frontier.com](mailto:ott.irene@frontier.com)



September 9, 2019

Ms. Sarah Esterson  
Siting Analyst  
Oregon Department of Energy  
550 Capitol St. NE, 1st Floor  
Salem, OR 97301

---

**Subject: Wheatridge Wind Energy Facility Request for Amendment 4 –  
Response to Reviewing Agency Comments on Draft Proposed Order**

---

Dear Ms. Esterson:

NextEra Energy Resources, LLC (NextEra), on behalf of Wheatridge Wind Energy, LLC (the Certificate Holder), is providing the following clarifications with respect to the comments provided on the Request for Amendment 4 (RFA 4) Draft Proposed Order by the Morrow County Board of Commissioners, which is serving as a Special Advisory Group for the Wheatridge Wind Energy Facility (Facility). NextEra's comments concern the letter from Carla McLane to the Oregon Department of Energy (ODOE), dated September 9, 2019. One of the comments is in regard to retirement of the solar facility, specifically regarding site restoration if 8-foot concrete-encased foundations are necessary for the solar posts.

NextEra would like to reiterate that the anticipated and preferred design for the solar panel posts are driven steel piles. With that said, the Certificate Holder's reference to concrete-encased foundations for the solar posts was to address a "worst-case" scenario for solar facility installation. Concrete encasement is only necessary in the worst of conditions (soft sand, wet areas, backfilled areas), so it is very unlikely. Foundations for inverters would be according to industry standards: slab on grade, and they would not have footings or frost walls. The foundation for the substation transformer may extend into the subgrade; but this has been accounted for in the cost estimate provided in Exhibit W, Attachment W-1 of RFA 4, and retirement and restoration associated with decommissioning will be the same as what was previously approved by the Energy Facility Siting Council (Council) for the Facility's substations.

The cost estimate in Exhibit W, Attachment W-1 of RFA 4 includes the removal of posts in their entirety. The actual effort to remove the posts, regardless of their construction method, is already provided in the cost estimate. However, there would be an additional cost to transport the concrete offsite. To transport 40,000 posts, with concrete encasement to the full depth of 8 feet, would result in 20,000 cubic yards of concrete at a rate of \$11.97 per cubic yard, for an additional cost to retirement of \$239,400. This brings the total "worst case" cost to retire the Facility to \$27,463,400. The Certificate Holder provided a letter of credit commitment in the amount of \$60,000,000 (see RFA 4, Exhibit M, Attachment M-1); it would therefore cover any incremental increase to the

retirement costs from concrete encasing that had not previously been accounted for in the calculations.

The Facility is located entirely on exclusive farm use (EFU) zoned land. Therefore, to satisfy the retirement standard as part of the Application for Site Certificate, the Certificate Holder had to show that the site can be restored to a useful, non-hazardous condition appropriate for EFU uses, including dry wheat farming. The Council found after reviewing the Application for Site Certificate and through subsequent amendments that the Facility site can be adequately restored to a useful, non-hazardous condition following permanent cessation of construction or operation of the Facility, including the removal of turbine foundations. Site Certificate Conditions OPR-LU-03 and OPR-LU-06 provide the *minimum* retirement restoration plan activities required for decommissioning which will require Council approval as part of plan finalization and includes consulting with land owners as well as providing copies of retirement and restoration plans to Morrow and Umatilla counties. Therefore, no condition changes are warranted because the Certificate Holder has provided a letter of credit commitment that would account for the “worst-case” scenario for the Facility’s decommissioning and restoration costs, the site can be returned to a useful condition for EFU uses (similarly to what was previously approved by the Council), and there are adequate Site Certificate Conditions to ensure compliance in restoring the site to a useful condition.

NextEra would also like to comment on the letter from the Confederated Tribes of the Umatilla Indian Reservation (CTUIR) to the ODOE, dated September 5, 2019, regarding a Traditional Use Survey. The Certificate Holder met with the CTUIR in Spring 2019 and has initiated coordination for a Traditional Use Survey, which will be conducted by CTUIR. In addition, the Certificate Holder will coordinate with CTUIR for on-site monitoring during the portions of the Facility’s construction where ground disturbance will occur.

Thank you for your consideration.

Best regards,



Jesse Marshall

Project Director

NextEra Energy Resources

(760) 846-4421

jesse.marshall@nee.com

**Attachment D: Draft Habitat Mitigation Plan**



# **Wheatridge Wind Energy Project**

## **Draft Habitat Mitigation Plan**

**Prepared for**  
**Wheatridge Wind Energy, LLC**  
245 W. Main Street, Suite 200  
Ione, Oregon 97843

**Prepared by:**



**Rick Gerhardt**  
**Northwest Wildlife Consultants, Inc.**  
815 NW 4th St.  
Pendleton, Oregon 97801

**March 30, 2015**

**Updated by**



**Tetra Tech, Inc.**  
1750 SW Harbor Way, Suite 400  
Portland, Oregon 97201  
**June 2019**

This page intentionally left blank

## 1.0 Introduction

The Wheatridge Wind Energy Facility (Facility) is an approved, but not yet constructed, wind energy generation facility consisting of up to 292 turbines with a peak generating capacity of up to 500 megawatts (MW), located in an Approved Site Boundary of approximately 13,097 acres in Morrow and Umatilla counties, Oregon. As part of Request for Amendment 4 (RFA 4) to the Facility Site Certificate through the Energy Facility Siting Council (EFSC), Wheatridge Wind Energy, LLC (Certificate Holder) is proposing to add up to 150 MW of photovoltaic solar energy generation to the Facility to provide the opportunity for an integrated, renewable energy facility with both wind and solar energy generation and energy storage. RFA 4 would expand the Approved Site Boundary by 2,294.3 acres (to a total of 14,264.3 acres) to provide for solar generation and energy storage facilities.

This draft Habitat Mitigation Plan (HMP) provides concepts for meeting the habitat mitigation needs of the amended Facility. Northwest Wildlife Consultants (NWC) has conducted habitat categorization surveys and other biological studies that inform habitat categorization in accordance with the Oregon Department of Fish and Wildlife's (ODFW) Fish and Wildlife Habitat Mitigation Policy, Oregon Administrative Rule (OAR) 635-415-0000 through 0025. NWC has also identified potential mitigation opportunities and potential habitat enhancement actions.

The Certificate Holder's goal is to reduce and eliminate the impact of the amended Facility over time by preserving and maintaining in-kind habitat in the Columbia Basin Ecoregion to achieve a net benefit to Category 2 habitat, and no net loss of Categories 3 and 4 through the concepts proposed in this draft HMP. The proposed concepts were discussed with personnel from the ODFW on August 20, 2012 and on July 11, 2014. The March 30, 2015 HMP Draft Concepts included habitat impact acreages known as of early spring 2015. This May 2019 version adds habitat impact acreages from the solar energy generation and its related or supporting facilities proposed for addition to the Facility under RFA 4. This May 2019 version also incorporates changes requested by ODFW in the April 28, 2017 Draft Final Order (Redline) with Attachments (EFSC 2017a). The actual acres of temporary and permanent impacts and the associated mitigation requirements will be determined based on the final design and included in a final HMP prior to construction.

## 2.0 Description of Impacts

Habitat mapping and categorization has been completed in accordance with the ODFW Fish and Wildlife Habitat Mitigation Policy. The process is documented in Exhibit P for both the ASC and for RFA 4, and summarized in this draft HMP. No wetlands, perennial streams or other aquatic habitats are addressed in this document because at the time of preparation (May 2019) no facilities are planned for these habitat types.

The ODFW Fish and Wildlife Habitat Mitigation Policy categorizes 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.

**Table 1. Habitat Categorization Types**

Category Type	Definition <sup>1</sup>	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.
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.		

Impacts may be permanent or temporary. Permanent impacts are defined as those impacts that will exist for the life of the Facility. Temporary impacts are those impacts that will last for a time less than the life of the Facility. The duration of temporary impacts to habitat will vary by habitat subtype. For example, the recovery period for agricultural areas that were temporarily disturbed could be as short as 1 to 3 years, grasslands generally recover within 3 to 7 years, and shrublands may require 10 to 50 years to recover (with the longer recovery periods associated with disturbances in mature sagebrush habitats). The Certificate Holder will restore temporary impacts consistent with the Revegetation Plan.

As described in Exhibit P, Category 1 habitat includes habitat within 785 feet of documented Washington ground squirrel (*Urocitellus washingtoni*) colonies. Category 1 habitat occurs within the Site Boundary, but the Facility is designed and micrositied to avoid Category 1 habitat. Therefore, there are no impacts to Category 1 habitat. Category 2 habitat occurs in the Site Boundary and will be impacted by the Facility. Category 2 habitat is associated with ODFW mule deer winter range (ODFW 2012) and areas of potential Washington ground squirrel use. Areas of potential ground squirrel use are adjacent to and within 4,921 feet (1.5 kilometers [km]) of ground squirrel Category 1 habitat, but not occupied by any squirrels either for burrowing or foraging,



which is of similar habitat type and quality to the adjacent Washington ground squirrel Category 1 habitat. Category 3, 4, and 6 habitat will also be impacted by the Facility, while Category 5 habitat is not identified in the Site Boundary. Table 2 shows the acres of permanent and temporary impacts in each habitat category by habitat subtype for Wheatridge West, Wheatridge East, Transmission Intraconnection Line, and the Solar facilities.

**Table 2. Temporary and Permanent Impacts by Habitat Category and Habitat Subtype**

Habitat Category and Habitat Subtype		Impacts (acres) <sup>1</sup>	
		Temporary	Permanent
<b>Wheatridge West</b>			
<b>Category 2</b>			
Developed-Revegetated or Other Planted Grassland		106.9	17.0
Grassland-Exotic Annual		13.3	1.7
Grassland-Native Perennial		32.3	5.5
Shrub-steppe-Basin Big Sagebrush		2.5	0.8
Shrub-steppe-Rabbitbrush/Snakeweed		0.4	–
<b>Subtotal Category 2</b>		<b>155.5</b>	<b>24.9</b>
<b>Category 3</b>			
Developed-Revegetated or Other Planted Grassland		60.7	8.0
Grassland-Native Perennial		28.7	5.5
Shrub-steppe-Rabbitbrush/Snakeweed		2.1	0.0 <sup>2</sup>
<b>Subtotal Category 3</b>		<b>91.5</b>	<b>13.5</b>
<b>Category 4</b>			
Grassland-Exotic Annual		11.6	1.8
<b>Subtotal Category 4</b>		<b>11.6</b>	<b>1.8</b>
<b>Category 6</b>			
Developed-Dryland Wheat		533.3	88.3
Developed-Other		1.0	0.3
<b>Subtotal Category 6</b>		<b>534.3</b>	<b>88.6</b>
<b>Total for Wheatridge West</b>	<b>921.7</b>	<b>792.9</b>	<b>128.8</b>
<b>Wheatridge East</b>			
<b>Category 2</b>			
Grassland-Exotic Annual		17.2	3.3
Grassland-Native Perennial		19.5	2.6
<b>Subtotal Category 2</b>		<b>36.7</b>	<b>6.0</b>
<b>Category 3</b>			
Grassland-Native Perennial		14.4	1.9
Shrub-steppe-Rabbitbrush/Snakeweed		12.1	1.9

Habitat Category and Habitat Subtype		Impacts (acres) <sup>1</sup>	
		Temporary	Permanent
<b>Subtotal Category 3</b>		<b>26.4</b>	<b>3.8</b>
<b>Category 4</b>			
Grassland-Exotic Annual		7.8	1.3
Grassland-Native Perennial		1.2	0.2
Shrub-steppe-Rabbitbrush/Snakeweed		2.7	0.3
<b>Subtotal Category 4</b>		<b>11.7</b>	<b>1.8</b>
<b>Category 6</b>			
Developed-Dryland Wheat		185.7	29.9
<b>Subtotal Category 6</b>		<b>185.7</b>	<b>29.9</b>
<b>Total for Wheatridge East</b>	<b>302.1</b>	<b>260.6</b>	<b>41.5</b>
<b>Transmission Intraconnection Line</b>			
<b>Category 2</b>			
Developed-Revegetated or Other Planted Grassland		11.5	0.1
Grassland-Exotic Annual		3.0	0.0
Grassland-Native Perennial		36.8	0.2
Shrub-steppe-Basin Big Sagebrush		0.7	0.0
Shrub-steppe-Rabbitbrush/Snakeweed		14.7	0.1
<b>Subtotal Category 2</b>		<b>66.7</b>	<b>0.4</b>
<b>Category 3</b>			
Developed-Revegetated or Other Planted Grassland		7.2	0.1
Grassland-Native Perennial		6.7	0.0
Shrub-steppe-Basin Big Sagebrush		0.4	0.0
Shrub-steppe-Rabbitbrush/Snakeweed		2.5	0.0
<b>Subtotal Category 3</b>		<b>16.8</b>	<b>0.1</b>
<b>Category 4</b>			
Grassland-Exotic Annual		2.5	0.0
<b>Subtotal Category 4</b>		<b>2.5</b>	<b>0.0</b>
<b>Category 6</b>			
Developed-Dryland Wheat		56.3	0.4
Developed-Irrigated Agriculture		1.0	0.0
Developed-Other		0.6	0.0
<b>Subtotal Category 6</b>		<b>58.0</b>	<b>0.4</b>
<b>Total for Transmission Intraconnection Line</b>	<b>144.9</b>	<b>144.0</b>	<b>0.9</b>
<b>Solar Facilities</b>			
<b>Category 2</b>			

Habitat Category and Habitat Subtype		Impacts (acres) <sup>1</sup>	
		Temporary	Permanent
Developed-Revegetated or Other Planted Grassland		0.7	0.0
Grassland-Exotic Annual		0.6	3.0
Grassland-Native Perennial		0.4	1.3
Shrub-steppe-Basin Big Sagebrush		0.0	0.0
Shrub-steppe-Rabbitbrush/Snakeweed		0.0	0.0
<b>Subtotal Category 2</b>		<b>1.7</b>	<b>4.3</b>
<b>Category 3</b>			
Developed-Revegetated or Other Planted Grassland		0.0	0.0
Grassland-Native Perennial		0.7	0.0
Shrub-steppe-Basin Big Sagebrush		0.0	0.0
Shrub-steppe-Rabbitbrush/Snakeweed		0.0	0.0
<b>Subtotal Category 3</b>		<b>0.7</b>	<b>0.0</b>
<b>Category 4</b>			
Grassland-Exotic Annual		0.3	76.0
Grassland-Native Perennial		0.0	0.0
Shrub-steppe-Rabbitbrush/Snakeweed		0.0	0.0
<b>Subtotal Category 4</b>		<b>0.3</b>	<b>76.0</b>
<b>Category 6</b>			
Developed-Dryland Wheat		4.6	812.6
Developed-Irrigated Agriculture		0.0	0.0
Developed-Other		1.4	0.2
<b>Subtotal Category 6</b>		<b>6.0</b>	<b>812.7</b>
<b>Total for Solar Facilities</b>	<b>901.8</b>	<b>8.7</b>	<b>893.1</b>
<b>Grand Total</b>	<b>2,270.4</b>	<b>1,206.2</b>	<b>1,064.3</b>
1. Totals in this table may not be precise due to rounding.			

### 3.0 Methods for Calculating Mitigation

Mitigation calculations presented in the 2015 Habitat Mitigation Plan were modified in response to comments from ODFW published in the April 2017 Final Order (EFSC 2017a). To be consistent with the Fish and Wildlife Habitat Standard (OAR 345-022-0060), the EFSC adopted Fish and Wildlife Condition 10 in the Site Certificate (EFSC 2017b), which states the following:

*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*
- d. 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.*
- e. 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.*
- f. 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.*
- g. 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.*

EFSC cites public hearing comments from ODFW, stating that the 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 2017a). The 2015 HMP 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, which applies to permanent impacts resulting from placement of wind facility components. The ratio has been modified so that all impacts on Category 2 habitat are mitigated at a >1:1 ratio. For solar facility components, a 2:1 ratio will be utilized, unless based on the habitat assessment of the habitat mitigation area there is sufficient quantity and quality that a lesser than 2:1 ratio is sufficient, based upon review and concurrence by the Department in consultation with ODFW, for achieving the Category 2 habitat mitigation goal. In addition, temporary impacts on Category 4 shrub-steppe habitat are mitigated at a <1:1 ratio, instead of not having mitigation. Table 3 shows the methods for calculating mitigation for permanent impacts and Table 4 shows the methods for calculating mitigation for temporary impacts. The Certificate Holder is not proposing compensatory mitigation under the ODFW Fish and Wildlife Habitat Mitigation Policy for impacts to Category 6 habitat.

**Table 3. Calculating Mitigation for Permanent Impacts**

Habitat Category	Impact Acres	Mitigation Ratio	Mitigation Description
Category 2 <sup>1</sup>	1	<del>2</del> <sup>&gt;</sup> <del>1</del>	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 & 4 habitat 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.
<u>Notes: The certificate holder may request to reduce the ratio of 2:1 for impacts to Category 2 habitat if, based on review by the Department in consultation with ODFW, the habitat assessment of the compensatory mitigation area represents sufficient quantity and quality of Category 2 habitat to mitigate the impacts using a lower acreage ratio (e.g. &gt;1:1).</u>			

**Table 4. Calculating Mitigation for Temporary Impacts**

Habitat Category	Habitat Subtype	Impact Acres	Mitigation Ratio	Mitigation Description
Category 2	All	1	>1	The mitigation goal for Category 2 habitat is “no net loss” and “net benefit.” Accordingly, mitigation for temporary impacts on Category 2 habitat needs to demonstrate a net benefit in quality or quantity. Mitigation would be a greater amount of acreage than what is impacted by the project. All areas of temporary disturbance would be restored at the site of impact. The proposed mitigation ratio would meet the “net benefit” requirement and would account for the temporary loss of habitat function during restoration.
Category 3	Grassland-Native Perennial, Shrub-steppe-Basin Big Sagebrush, Shrub-steppe-Rabbitbrush/Snakeweed	1	<1	The mitigation goal for Category 3 & 4 habitat is “no net loss” in quantity or quality. Depending on the habitat subtype temporarily disturbed, the proposed mitigation ratio would result in a lesser amount of acreage of mitigation than what

Habitat Category	Habitat Subtype	Impact Acres	Mitigation Ratio	Mitigation Description
Category 4	Shrub-steppe-Rabbitbrush/Snakeweed			is impacted by the project. Combined with restoration of temporary disturbances, the proposed mitigation ratio is intended to account for the temporary loss of habitat functionality and meet the “no net loss” goal.
Category 6	All	1	0	The mitigation goal for Category 6 habitat is minimization; no compensatory mitigation is proposed.

## 4.0 Estimated Mitigation for the Amended Facility

Table 5 applies the acres of temporary and permanent impacts shown in Table 2 with the mitigation ratios shown in Table 3 and Table 4 to estimate mitigation requirements.

**Table 5. Mitigation Accounting by Habitat Category and Habitat Subtype**

Habitat Category <sup>1</sup>	Habitat Subtype	Impact	Acres	Mitigation Ratio	Estimated Mitigation	Mitigation Subtotal by Habitat Category
2	Developed-Revegetated or Other Planted Grassland	Temp	119.1	>1	>119.1	>296.2321 <sup>2</sup>
		Perm	17.1	>21	>17.134.2	
	Grassland-Exotic Annual	Temp	34.2	>1	>34.2	
		Perm	8.0	>21	>816.0	
	Grassland-Native Perennial	Temp	89.0	>1	>89.0	
		Perm	9.6	>21	>9.619.2	
	Shrub-steppe-Basin Big Sagebrush	Temp	3.2	>1	>3.2	
		Perm	0.8	>21	>0.168	
3	Developed-Revegetated or Other Planted Grassland	Temp	15.1	>1	>15.1	> 17.4, up to 84.9
		Perm	0.1	>21	0.21	
	Developed-Revegetated or Other Planted Grassland	Temp	67.9	0	0.0	
		Perm	8.1	1	8.1	
	Grassland-Native Perennial	Temp	50.5	<1	<50.5	
		Perm	7.4	1	7.4	
	Shrub-steppe-Basin Big Sagebrush	Temp	0.4	<1	<0.4	
		Perm	0.0	0	0.0	
	Shrub-steppe-Rabbitbrush/Snakeweed	Temp	16.6	<1	<16.6	
		Perm	2.0	1	2.0	

Habitat Category <sup>1</sup>	Habitat Subtype	Impact	Acres	Mitigation Ratio	Estimated Mitigation	Mitigation Subtotal by Habitat Category
4	Grassland-Exotic Annual	Temp	22.3	0	0.0	> 79.7, up to 82.4
		Perm	79.2	1	79.2	
	Grassland-Native Perennial	Temp	1.2	0	0.0	
		Perm	0.2	1	0.2	
	Shrub-steppe-Rabbitbrush/ Snakeweed	Temp	2.7	<1	<2.7	
		Perm	0.3	1	0.3	
TOTALS						> <del>393.34</del> 95
1. No mitigation is accrued for impacts on Category 6 habitat. 2. Category 2 habitat originates from 224.2 acres of mule deer winter range and 88.4 acres of Washington ground squirrel potential area of use. Overlap occurs between mule deer winter range and Washington ground squirrel potential areas of use in some areas.						

## 5.0 Habitat Mitigation Area

### 5.1 Description

The Habitat Mitigation Area (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 Facility. 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 Holder looked for privately-owned lands that contained native and revegetated uplands of interest and importance for conservation. The ODFW has identified “strategy habitats” and approaches for “conservation actions” within the Columbia Plateau Ecoregion (ODFW, 2006). The Oregon Conservation Strategy is “intended to provide a long-term, big-picture “blue print” for conserving Oregon’s natural resources to maintain or improve environmental health...” (ODFW, 2006). The Certificate Holder also looked for lands that were within designated mule deer winter range.

The Certificate Holder has identified more than 550 acres of suitable in-kind and in-proximity habitat for consideration by ODFW and ODOE. ODFW personnel are familiar with the proposed site of the HMA. The HMA contains ODFW “strategy habitats” and other wildlife habitat similar to those being impacted by the amended Facility.

The HMA habitats include Native Perennial Grassland, Revegetated Grassland, Basin Big Sagebrush Shrub-steppe, Rabbitbrush/Buckwheat Shrub-steppe, and Exotic Annual Grassland habitats of



varying quality. Basalt escarpments also occur in the HMA. Wildlife species usage of the HMA is similar to what has been recorded during surveys of the Facility. Other long-term conserved habitat (approximately 324 acres) consisting of Native Perennial Grassland and Shrub-steppe is nearby and with the addition of this HMA, a larger more valuable tract of protected habitat will be available for wildlife.

Raptors, including golden eagles, hunt on the HMA and some nest onsite or in the general area. There are opportunities for implementing habitat enhancement actions, as needed for the final habitat mitigation compliance. NWC has confirmed with ODFW that the parcels under current consideration have adequate potential for mitigating the habitat loss expected to occur and for providing benefit for the wildlife species that use the habitats impacted by habitat loss associated with the amended Facility, including big game. All of the habitat proposed for use as mitigation lies within designated deer winter range (ODFW 2012). Through an agreement with the landowner, the Certificate Holder has secured the ability for a long-term easement of suitable habitat on a portion of the available 550 acres at the site of the proposed HMA. The final amount of mitigation to be put into easement will be determined based on the final design and through pre-construction compliance surveys that will be performed to confirm habitat categorization.

## 5.2 Habitat Enhancement Actions

Habitat designated for mitigation will be conserved and protected from alteration for the life of the Facility. Final detailed enhancement actions and monitoring procedures will be designed in consultation with the ODFW and biologists familiar with the HMA. Besides such legal protection to ensure no development, potential enhancement actions for the HMA include the following.

- Modification of grazing practices—wildlife habitat values have priority and livestock grazing will be reduced or restricted from the HMA to ensure that habitat is maximally useful to wildlife, livestock grazing can be used as a wildlife habitat enhancement tool.
- The Certificate Holder will work with the landowner to monitor and control or eradicate County-designated noxious weeds impacting wildlife habitat quality. A Weed Plan will be prepared.
- Seeding and planting with native plants—sagebrush and bunch grasses—will occur in reasonable proportion to the acres of functional sagebrush and native grassland habitats lost through Facility construction. Sagebrush seeding and/or planting will provide future cover and browse for wintering mule deer. Specific details for amount and extent to be determined after final Facility impacts are known. Native grassland plugs and young shrubs can be planted in sensitive areas where seeding is not appropriate.
- A plan for fire response and control will be in place and applied to the HMA. It will include fire prevention measures, methods to detect fires, and a protocol for fire response and suppression.
- Wildlife Projects:

- Where old barbed wire fence on the HMA presents potential problems for big game and other wildlife, the Certificate Holder will work with the landowner to remove such fencing.
- Wildlife guzzler as a watering source for wildlife.
- Install burrowing owl artificial burrows. Burrows would be paired and pairs separated by 0.25 mile.
- Install artificial raptor nest platforms (target species is Ferruginous hawk).
- Strategic removal of Washington ground squirrel mammalian predators. An example would be to live-trap and transplant badgers that are disturbing ground squirrel natal sites in the fall and winter.
- Habitat protection will involve restricting any uses of the mitigation area 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.

Enhancement activities will be performed on an appropriate portion of the HMA to meet the required mitigation goals. The habitat within the HMA is currently of higher quality to most of the habitat to be impacted within mule deer winter range. In addition, the HMA and connected lands support Washington ground squirrel habitat.

### 5.3 HMA Monitoring

The Certificate Holder will hire a qualified, independent 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 the Facility, with annual monitoring occurring over the first three to 5 years and subsequent long-term monitoring occurring at 5-year intervals. At a minimum, annual monitoring will include assessments of:

- Amount and quality of vegetation;
- Success of weed control measures;
- Degree of recovery of native grasses and forbs;
- Success of revegetation measures (where applicable);
- Wildlife observed and notes on special status species (wildlife and plants) present; and
- Maintenance needs of guzzler, nest platforms and artificial burrows, if installed;

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.

### 5.4 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 minimum amount of habitat protection and enhancement required will be calculated as in Table 5 above using the impact acreages associated with the final Facility design. If sufficient high-quality habitat is not available for protection, habitat mitigation goals can be achieved by enhancing the required amount of habitat to bring it up to the higher category. Criteria for assessing such a category improvement will include density and quality of native vegetation of the appropriate types (e.g., desirable forbs and bunchgrasses) successful control of noxious weeds, and other criteria developed in conjunction with the department.

Habitat protection and enhancement must endure for the life of the Facility. That is, even after habitat protection and enhancement has been achieved, periodic monitoring must take place to assess whether protection and enhancement persists at levels commensurate with mitigation goals. Should habitat quality fall below that prescribed by the HMP, the Certificate Holder will, in consultation with ODFW and ODOE, propose adaptive management actions for compensating for such a failure to meet mitigation goals.

## **6.0 Amendment of the HMP**

This HMP may be amended by agreement of the holder of the Site Certificate and the Oregon Energy Facility Siting Council. Amendments to this Plan will not require an amendment of the Site Certificate.

## **7.0 References**

EFSC (Oregon Energy Facility Siting Council). 2017a. Final Order: In the Matter of the Application for a Site Certificate for the Wheatridge Wind Energy Facility. April 2017.

EFSC 2017b. Site Certificate for the Wheatridge Wind Energy Facility. April 27, 2017.

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>

**Attachment E: Draft Amended Revegetation Plan**



# **Wheatridge Wind Energy Project**

## **Draft Revegetation Plan**

**Prepared for**  
**Wheatridge Wind Energy, LLC**  
245 W. Main Street, Suite 200  
Ione, Oregon 97843

**Prepared by:**



**Rick Gerhardt**  
**Northwest Wildlife Consultants, Inc.**  
815 NW 4th St.  
Pendleton, Oregon 97801

**March 30, 2015**

**Updated by**



**Tetra Tech, Inc.**  
1750 SW Harbor Way, Suite 400  
Portland, Oregon 97201  
**June 2019**

This page intentionally left blank

## Table of Contents

1.0	Introduction .....	1
2.0	Site Description.....	1
3.0	Revegetation Methods .....	2
3.1	Restoration of Cropland .....	2
3.2	Restoration of Wildlife Habitat.....	2
4.0	Monitoring .....	3
4.1	Revegetation Record.....	3
4.2	Monitoring Procedures.....	3
4.2.1	Weed Control.....	3
4.2.2	Wildlife Habitat Recovery .....	4
4.3	Success Criteria .....	4
4.4	Remedial Action.....	5
5.0	Plan Amendment.....	5

This page intentionally left blank



## **1.0 Introduction**

This document has been prepared for the Wheatridge Wind Energy Facility (Facility) as part of Request for Amendment 4 (RFA 4) to the Facility Site Certificate, submitted to the Oregon Department of Energy (ODOE). It provides primary concepts for meeting the needs for revegetation following Facility construction and will be finalized (by ODOE) into a formal Revegetation Plan. The concepts provided here are consistent with approved plans in place for other Oregon wind projects in similar habitats, in particular those that are permitted through the Oregon Energy Facility Siting Council (EFSC). The Leaning Juniper II, Stateline, and Montague Revegetation Plans, and available revegetation monitoring reports for wind and natural gas energy projects served as models for the Wheatridge concepts.

The Revegetation Plan, which has been developed in consultation with personnel from the Oregon Department of Fish and Wildlife (ODFW), delineates practices and standards for restoring those areas temporarily disturbed during construction of the Facility; it does not apply to areas permanently occupied by the Facility. Such restoration is a requirement of the Site Certificate.

This plan describes planting methods, monitoring requirements, success criteria, and adaptive management (in case success criteria are not met). Throughout Facility construction and revegetation activities, the Certificate Holder will take appropriate actions to prevent the spread of noxious weeds (as identified in Morrow County Ordinance No. MC-C-3-90 and No. MC-C-2-99 Appendices A and B). Where appropriate, and pursuant to consultation with the county weed control managers, monitoring of the establishment of noxious weeds and of the effectiveness of weed control or eradication may be performed in concert with the revegetation monitoring described in this document.

## **2.0 Site Description**

The Facility is located primarily in Morrow County, with a small portion in Umatilla County, Oregon. It lies within the Columbia Plateau Ecoregion, entirely on private land and primarily in agricultural land used for growing dryland wheat. Native vegetation has been modified by historical and current livestock grazing, by changes in fire regimes, and by the presence of exotic grasses and other vegetation.

Primary soil types include Mikkalo, Willis, Ritzville, and Warden, and land cover types are Developed (Dryland Wheat, Revegetated Grassland, and Other Developed), Grassland (Exotic Annual and Native Perennial), and Shrub-steppe (Basin Big Sagebrush and Snakeweed/Rabbitbrush). The amounts and types of habitats expected to be disturbed during Project construction are described in Exhibit P of the Application for Site Certificate and Exhibit P of RFA 4. For purposes of this plan, Developed-Dryland Wheat is referred to as cropland and Developed-Revegetated Grassland, both Grassland and both Shrub-steppe land cover types are referred to as wildlife habitat. Developed-Other land cover types include farm and ranch homes and

related infrastructure, roads, quarries, livestock facilities, and other areas associated with human activity.

### 3.0 Revegetation Methods

This plan addresses revegetation methods for both croplands and wildlife habitat. Restoration of Developed-Other land cover types will be determined on a case-by-case basis and is not covered further in this plan. Revegetation will begin as soon as feasible after completion of construction and seeding and planting will be done in a timely manner and in the appropriate season.

Agricultural land restoration methods will likely be designed in consultation with the landowner. 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 will be restored and mulching and other erosion control measures will be used throughout construction and during revegetation efforts. Preconstruction land use, soil, and vegetation type will dictate the seed mix used for each area to be restored; the wildlife habitat seed mixes used will be finalized in consultation with ODFW and will comply with the Oregon Seed Law (OAR 603-056).

#### 3.1 Pre-Revegetation Agency Consultation

The certificate holder shall consult with ODFW, ODOE and County Weed Control Authority personnel prior to construction to discuss the area(s) to be restored, habitat category and habitat subtype conditions, reference plot location and conditions, topsoil restoration and revegetation methods, erosion and sediment control measures, and implementation schedule.

During construction the certificate holder will implement site stabilization measures, including seeding of temporarily disturbed areas according to its NPDES permit. Six months prior to commercial operation, the certificate holder will meet with ODFW, ODOE, and County Weed Control Authority personnel to review the actual extent and conditions of temporarily impacted areas, confirm the revegetation methods agreed to during pre-construction review are still appropriate, and to re-visit reference areas.

The certificate holder shall restore temporarily disturbed wildlife habitat areas by preparing the soil and seeding using common application methods. In areas where soil is removed during construction, the topsoil shall be stockpiled separately from the subsurface soils. The conserved soil shall be put back in place as topsoil prior to revegetation activities.

Additional site-specific soil preparation and seeding methods may be determined during the agency consultation period. The certificate holder shall use mulching and other appropriate practices to control erosion and sediment during construction and during revegetation work. The certificate holder shall select the seed mixes to apply based on the pre-construction land use, as described below. At the recommendation of ODFW, the grass seed mix will be comprised of grasses only in order to maximize flexibility for weed control. The certificate holder shall consult with ODFW as described in Section V below regarding appropriate seeding or planting per site- specific restoration needs.

### **3.2 Restoration of Cropland**

It is expected that croplands will be reseeded with the appropriate crop or maintained as fallow in consultation with the landowner or farm operator. The Certificate Holder will also consult with the landowner or farm operator to determine seed mix and 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 holder of the Site Certificate will report to ODOE on the success of cropland restoration efforts.

Soil compaction is a concern for restoring agricultural soils to their pre-construction productivity. During construction of temporary features, the certificate holder would excavate and store soils by soil horizon, so that soils could be replaced and restored appropriately including replacing topsoil on the surface. During post-construction restoration of temporary impacts to agricultural areas, the Certificate Holder would loosen agricultural soil to a depth of six feet to reduce the potential effects of compaction.

### **3.3 Restoration of Wildlife Habitat**

All wildlife habitat will be reseeded with a mix of native or native-like grasses, forbs, and shrubs characteristic of the area prior to construction disturbance. Seed mix and application rates will be determined in consultation with the landowner and ODFW, and will take into consideration soil types, erosion potential, and growing conditions. The seed mix will be approved by ODOE, and seeds will be obtained from a reputable supplier in compliance with the Oregon Seed Law (OAR 603-056).

Methods and timing of planting will be appropriate to the seed mix, weather conditions, and site conditions (including area size, slope, and erosion potential). Preparation of disturbed ground may

include replacing lost topsoil and/or chemical or mechanical weed control. Two common application methods for non-cropland are described below.

#### Broadcast Seeding

In this method, the seed mix will be broadcast at specified application rates. Broadcasting should not be utilized when winds exceed five 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 two tons per acre immediately after seeding; straw may either be crimped into the ground or applied with a tackifier.

#### Drill Seeding

In this method, seed will be planted using an agricultural or range seed drill according to application rates recommended by the seed supplier.

## **4.0 Monitoring**

### **4.1 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
- Description of the revegetation effort

The holder of the Site Certificate will update these records periodically as revegetation work occurs, and will provide ODOE with copies of these records with submission of the annual report required by the Site Certificate.

### **4.2 Monitoring Procedures**

Monitoring of the revegetation effort will be conducted by an independent botanist or revegetation specialist; this monitoring will be done during the first growing season after planting (Year 1), and again in Years 3 and 5. Nearby reference sites (approximating pre-construction conditions) will be selected as targets toward which revegetation will aim. Monitoring will not be required for areas that have been converted by the landowner to land uses that preclude meeting revegetation success criteria.

The certificate holder shall identify reference sites in consultation with ODFW. Reference sites shall be chosen to represent each of the habitat types identified in the Habitat Mitigation Plan. Once the reference sites are approved by ODFW, the certificate holder shall monitor those sites to establish baseline conditions as they relate to the success criteria for the project.

Documentation of baseline conditions at reference sites shall occur prior to commencement of



revegetation efforts. The certificate holder shall monitor the revegetation of wildlife habitat areas as described in this section, unless the landowner has converted the area to a use inconsistent with the success criteria. The certificate holder's qualified investigator (a botanist or revegetation specialist) shall examine all non-cropland revegetation areas to assess vegetation cover of the reference sites prior to construction (species, structural stage, etc.); and following completion of construction, the qualified investigator shall assess the progress of disturbed areas toward meeting the success criteria described below.

#### **4.2.1 Weed Control**

A qualified investigator will be employed to annually assess weed growth during the first five years of revegetation work and to make recommendations on weed control measures. Reports will be

submitted to the holder of the Site Certificate, to ODOE, and to ODFW following each annual inspection. These reports will identify areas and describe extent of weed growth and describe the success of control measures. At the time of the year-5 report, the investigator will consult with ODOE, ODFW, and the holder of the Site Certificate to design an appropriate plan for subsequent weed control.

#### **4.2.2 Wildlife Habitat Recovery**

In the first growing season after planting of areas to be revegetated, a qualified independent investigator (botanist or revegetation specialist) will inspect each wildlife habitat revegetation area to assess the success of revegetation measures. These assessments will be repeated in Year 3 and Year 5. Annual reports will be submitted to the holder of the Site Certificate, to ODOE, and to ODFW. Assessments will address whether each wildlife habitat revegetation area is trending toward meeting the success criteria described below.

In consultation with ODFW, 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 weeds
- Degree of erosion
- Vegetative density
- Proportion of desirable vegetation
- Species diversity and structural stage of desirable vegetation

Reference sites will be chosen with consideration to land use patterns, soil types, terrain, and presence of noxious weeds. It is expected that a variety of reference sites will be required to represent the range of disturbed areas for which revegetation is required. New reference sites may be chosen if land use changes, wildfire, or other disturbance makes a chosen reference site no longer representative of target conditions.

Based on the Year 5 assessment, the holder of the Site Certificate will consult with ODOE and ODFW to design an action plan for subsequent years. ~~The holder of the Site Certificate may propose remedial actions and/or additional monitoring for areas that have not met the success criteria.~~

~~Alternatively, revegetation efforts may in some cases be deemed to have failed, and mitigation may be proposed in such cases to compensate for habitat loss.~~

Following the Year 5 revegetation monitoring the certificate holder shall confer with the Department and ODFW to develop an action plan for subsequent years. If an area is not trending toward meeting the success criteria at Year 5 and has not been converted by the landowner to an inconsistent use, the certificate holder may propose and the Department may require remedial action and additional monitoring based on an evaluation of site capability.

As an alternative, the certificate holder or the Department may conclude that revegetation of the area was unsuccessful and propose appropriate mitigation for the permanent loss of habitat quality and quantity. The certificate holder shall implement the action plan, subject to the approval of the Department.

The certificate holder's qualified investigator shall evaluate whether a wildlife habitat area is trending toward meeting the success criteria by comparing the revegetation area to an approved reference area. In consultation with the Department and ODFW, prior to construction, the investigator shall choose reference sites near the revegetation area to represent the target conditions for the revegetation effort. The investigator shall select one or more reference sites that closely resemble the pre-disturbance characteristics of the revegetation area as indicated by site conditions, including vegetation density, relative proportion of desirable vegetation, and species diversity of desirable vegetation. "Desirable vegetation" means those species included in the seed mix or native or native-like species, excluding noxious weeds. "Noxious weeds" are defined as non-native species as identified as noxious on state or county noxious weed lists. The investigator shall consider land use patterns, soil type, local terrain, and noxious weed densities in selecting reference sites. It is likely that different reference sites will be needed to represent different pre-disturbance habitat conditions of the disturbed areas. Once reference sites are selected by the certificate holder and approved by the Department and ODFW, the reference site shall remain in the same location unless approval for use of a differing reference site is obtained by the Department and ODFW. In the first semi-annual revegetation monitoring report submitted to the Department, the certificate holder shall provide a map and table presenting the latitude and longitude of the reference sites.

During the initial 5-years of annual monitoring, the certificate holder's qualified investigator shall compare the revegetation area to the selected reference sites, unless some event (such as wildfire, tilling, or intensive livestock grazing) has changed the vegetation conditions of a reference site so that it no longer represents undisturbed conditions of the revegetation area. If such events have eliminated all suitable reference sites for a revegetation area, the investigator, in consultation with the Department and ODFW, shall select one or more new reference sites.

Following the selection of a new reference site, an updated table and latitude/longitudinal data shall be provided to the Department within the semi-annual monitoring report or annual compliance report, whichever report is submitted first.

The certificate holder will submit its vegetation monitoring methodology to ODFW and ODOE for approval prior to assessing baseline conditions and prior to annual monitoring. Within each revegetation area, the investigator shall evaluate the progress of wildlife habitat recovery in comparison to the reference sites.

The certificate holder shall report the investigator's findings and recommendations regarding wildlife habitat recovery and revegetation success in the semi-annual revegetation monitoring report to the Department and to ODFW.

### 4.3 Success Criteria

Each annual report will involve an assessment of the progress toward revegetation objectives of each area of wildlife habitat disturbed during Project construction. The overarching metric for success is when the habitat quality is equal to or better than the quality at the relevant reference site according to the conditions described above. Final determination of whether the holder of the Site Certificate has met the revegetation obligations will be made by ODOE.

A wildlife habitat area is successfully revegetated when its habitat quality is equal to, or better than, the habitat quality of the reference site as follows:

- Vegetation density is equal to or greater than that of the reference site.
- Relative proportion of desirable vegetation is equal to or greater than that of the reference site.
- Species diversity of desirable vegetation is equal to or greater than that of the reference site.

When the Department finds that the condition of a wildlife habitat area satisfies the criteria for revegetation success, the Department shall conclude that the certificate holder has met its restoration obligations for that area. If the Department finds that the landowner has converted a wildlife habitat area to a use that is inconsistent with these success criteria, the Department shall conclude that the certificate holder has no further obligation to restore the area for wildlife habitat uses.



#### **4.4 Remedial Action**

Remedial action options will be identified in cases where success criteria are not met, whether due to wildfire subsequent to Project 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 holder of the Site Certificate will take appropriate measures to meet the restoration objectives. The holder of the Site Certificate will annually report the investigator's recommendations for remedial actions and the measures taken. ODOE may require reseeding or other remedial actions in cases where revegetation objectives have not been met.

#### **5.0 Plan Amendment**

It is expected that the completed Revegetation Plan will make provision for an amendment process that would depend upon the agreement of all concerned parties. In particular, this Plan may be amended—without requiring an amendment to the Site Certificate—by agreement between the Oregon Energy Facility Siting Council (OEFSC) and the holder of the Site Certificate.

**Attachment F: Draft Noxious Weed Control Plan**

## Introduction

Wheatridge Wind Energy, LLC (certificate holder) holds a Site Certificate from the Oregon Energy Facility Siting Council for the Wheatridge Wind Energy Facility (Facility) in Morrow and Umatilla counties, Oregon. Land Use Condition 6 (PRE-LU-03) of the site certificate requires the following:

“Before beginning construction, the certificate holder shall prepare a final Noxious Weed Control Plan, consistent with the draft plan provided in Attachment F of the Final Order on RFA4, 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.”

This draft plan was prepared to comply with Land Use Condition 6 (PRE-LU-03) and describes the weed control measures that will be implemented during construction and operation of the Facility.

## Background Information

The Morrow County Weed Department works to keep noxious weed at a minimum on roadways and throughout the county, assists area landowners with land maintenance needs, and follows the Oregon Department of Agriculture (ODA) noxious weed policy and classification system as part of ODA’s Noxious Weed Control Program (see attachment to this plan). Noxious weeds are identified on the State of Oregon noxious weed list and mapped by ODA as occurring in Morrow County. “A” listed weeds are economically important, nonnative species with limited distribution in the county. “B” listed weeds are economically important, nonnative species that are regionally abundant. At the County level, eradication is required for “A” listed weeds at an intensive level, with containment the goal for “B” listed weeds. “T” listed weeds are a designated group of weed species that are selected and will be the focus for prevention and control by the Noxious Weed Control Program. Action against these weeds will receive priority (see the attachment to this plan).

For the purposes of this weed control plan, the term “weed” refers to any species on the Morrow County weed list regardless of its “A” or “B” status. The Facility area includes cultivated or otherwise developed agricultural land (cropland) as well as areas of grassland, shrub-steppe habitat, and other habitat subtypes (wildlife habitat areas). Noxious weeds are present within the site boundary, and construction activities could spread these weeds. This plan outlines the measures the certificate holder will implement to control weeds within areas disturbed by Facility construction and operation. The Facility will temporarily disturb approximately XX acres of wildlife habitat and approximately XX acres of cropland during road, transmission line, and wind and solar facility components construction. Temporarily disturbed areas will be revegetated as described in the site revegetation plan.

## **Weed Control Goals**

Weed species can adversely affect the structure and composition, and therefore the inherent values of the revegetation and habitat mitigation areas. Overarching goals of post-construction operations are prevention, identification, and control of weeds. Guidance and best management practices to accomplish these goals are provided in this plan.

## **Weed Species of Concern**

The certificate holder will survey weed species during its pre-construction habitat and Special status species surveys to determine the weed inventory and pre-disturbance noxious weed conditions. The results of these preconstruction surveys will be used to develop maps identifying and marking weeds targeted for control and to determine the appropriate method of control, which would include herbicide spraying, biological control, mechanical control (ie mowing, cultivation) or cultural (burning).

The final Noxious Weed Control Plan will establish the best timing of control treatments and a schedule for interval ongoing control and monitoring measures, based on consultation with the Oregon Department of Energy, Oregon Department of Fish and Wildlife, Morrow and Umatilla County Weed Control Departments.

## **Long-Term Weed Control (Example language to be considered in final plan)**

Long-term weed control will be accomplished through the seeding of perennial grasses known to compete well with noxious weeds, such as thickspike wheatgrass (*Elymus lanceolatus*) and Sherman big bluegrass (*Poa secunda*), or by maintaining the existing cover in the buffers. Short-term weed control will be through herbicide use. However, it will be important to ensure that the short-term herbicide use does not affect the establishment of the perennial grass cover intended to provide long-term control.

Early detection and management of small populations before they can expand into larger populations is extremely important for successful control.

Weed control will continue until the disturbed areas meet the success criteria described above with respect to the designated reference sites. Supplemental seeding may be needed to achieve this goal. Subsequent fertilizer application will be limited in areas treated for weeds, and the timing of the seeding will need to be coordinated with any herbicide applications. The knapweeds, rush skeletonweed, field bindweed, whitetop, yellow starthistle, and medusahead rye are the species of primary concern (“target” species) as they were observed onsite during the preconstruction surveys. Treatment specifics will differ depending on the following variables:

- Disturbed area or buffer
- Proximity to biologically sensitive areas

The target species will be the same for all onsite areas, but the treatment implementation will vary slightly according to these parameters.



The herbicides used and the timing of application will differ depending on whether the species are (1) perennial, broad-leaved, or dicot weeds (knapweeds and thistles, field bindweed, whitetop), or (2) annual grasses or monocots (goatgrass and medusahead). Appropriate herbicides differ substantially between dicots and monocots.

### **Best Management Practices (Example language to be considered in final plan)**

The certificate holder will implement best management practices during Facility construction and operation to help prevent the invasion and spread of noxious weeds onsite. These may include the following:

- Information regarding target weed species will be provided at the operations and maintenance building.
- Weed prevention and control measures, including Facility inspection and documentation, will be included in operations plans.
- Temporary ground-disturbing operations in weed-infested areas will be inspected and documented in accordance with Facility monitoring plan.
- Vehicles and equipment will be cleaned prior to entry into revegetation areas to help minimize introduction of noxious weed seeds to the site.
- To prevent conditions favoring weed establishment, temporarily disturbed areas will be revegetated soon as possible.
- The site will be revegetated with appropriate, locally collected native seed or native plants; when these are not available, noninvasive and nonpersistent, nonnative species may be used.
- Seed and straw mulch to be used for site rehabilitation will be inspected and certified free of weed seed and propagules.

### **Treatment (Example language to be considered in final plan)**

Before the initial weed treatment begins, the herbicide applicator personnel will meet with a botanist for a ½-day session to review the target species and their identification, and to identify native species to be avoided, such as the native thistle (*Cirsium undulatum*) onsite. Following the initial meeting between the botanist and herbicide applicators, the applicators will be responsible for identifying and treating the target species.

Control will be accomplished through use of herbicides targeted to the individual weed species. The herbicide is to be applied by a licensed applicator, using appropriate best management practices.

Herbicide application will occur twice in year 1, in the spring (knapweeds, thistles, bindweed) and fall (other species), and once a year thereafter during the spring (mid to late May), if necessary, until the success criteria are met. Herbicide will be applied with a spreader sticker surfactant (e.g., Dynamic Green Concepts, Phase). Rush skeletonweed will be treated throughout the growing season as it occurs. Information on identification of this and other target weed species will be included in the environmental training materials to be provided to operations staff. If rush skeletonweed is observed during routine operations activities at any time during the growing season, the licensed applicator will be contacted to treat this species

as soon after it is observed as practicable. Table 2 provides a summary of recommended treatment by target species.

### **Special Considerations (Example language to be considered in final plan)**

During treatment activities, the certificate holder will consider the following sensitive areas:

- **Washington ground squirrel sites**. The Washington ground squirrel is sensitive to disturbance during the breeding season (generally January through March, sometimes lasting through April). The diet of the Washington ground squirrel consists mostly of herbaceous vegetation, as well as flowers, roots, bulbs, seeds, and insects. Therefore, no herbicides will be sprayed within 400 meters (1,200 feet) of identified Washington ground squirrel sites during the breeding season.
- **Ephemeral streams/draws**. No herbicide will be sprayed where the drift can enter standing water or saturated soil. This precaution will likely only be necessary during the spring. However, it will be the herbicide applicators' responsibility to ensure that no herbicide or drift enters standing water.

### **Monitoring (Example language to be considered in final plan)**

Monitoring will be conducted on an annual basis by a qualified botanist for the first 5 years following initial seeding to assess weed growth and to recommend weed control measures. The weed monitoring will consist of two general components:

- Site survey to identify weed species that have established within the disturbed areas
- Inspections of treated areas to assess the success of the weed treatments

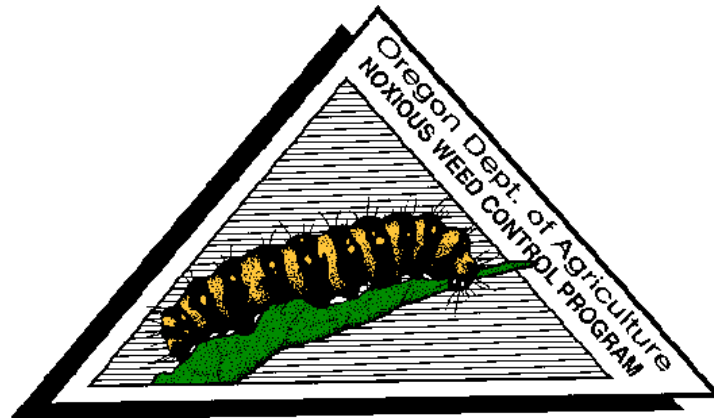
The site survey will be a pedestrian survey of disturbed areas in mid to late May. The survey will be scheduled to be initiated slightly before the herbicide application to identify any weed species. The focus will be on weed species observed prior to construction on the site (knapweed, starthistle, field bindweed, whitetop, jointed goatgrass, medusahead rye), as well as any other species on the Gilliam County weed list that might require different control methods.

The results of the site survey will be summarized in a short memorandum in which (1) any new weed species observed and treatment protocols are identified, (2) the location and weed species within the buffers are described, and (3) reference plot cover values are listed.

Subsequent monitoring results will be summarized in short memorandums in which the treatment success is described, any recommendations to improve treatment success (if necessary) are made, and any new weed species or emergence are noted. Following the initial five years of post-construction monitoring, the certificate holder shall consult with the Oregon Department of Energy, Oregon Department of Fish and Wildlife, Morrow and Umatilla County Weed Control Departments to determine the appropriate long-term weed management and control measures.

# Oregon Department of Agriculture

## Noxious Weed Policy and Classification System 2017



### Noxious Weed Control Program

Address: 635 Capitol Street NE Salem, Oregon 97301

Phone: (503) 986-4621 Fax: (503) 986-4786

[www.oregon.gov/ODA/programs/Weeds/Pages/AboutWeeds.aspx](http://www.oregon.gov/ODA/programs/Weeds/Pages/AboutWeeds.aspx)

## **Mission Statement**

To protect Oregon's natural resources and agricultural economy from the invasion and proliferation of invasive noxious weeds.

## **Program Overview**

The Oregon Department of Agriculture (ODA) Noxious Weed Control Program provides statewide leadership for coordination and management of state listed noxious weeds. The state program focuses on noxious weed control efforts by implementing early detection and rapid response projects for new invasive noxious weeds, implementing biological control, implementing statewide inventory and survey, assisting the public and cooperators through technology transfer and noxious weed education, maintaining noxious weed data and maps for priority listed noxious weeds, and assisting land managers and cooperators with integrated weed management projects. The Noxious Weed Control Program also supports the Oregon State Weed Board (OSWB) with administration of the OSWB Grant Program, developing statewide management objectives, developing Weed Risk Assessments, and maintaining the State Noxious Weed List.

Tim Butler  
Program Manager  
[tbutler@oda.state.or.us](mailto:tbutler@oda.state.or.us)  
503-986-4621



## Table of Contents

Policy and Classification System.....	1
Criteria.....	3
Classification Definitions.....	4
A Listed Weeds.....	5
B Listed Weeds.....	7

# Noxious Weed Control Policy and Classification System

## Definition

“Noxious Weed” means a terrestrial, aquatic or marine plant designated by the State Weed Board 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 become so thoroughly established and are spreading so rapidly on private, state, county, and federally owned lands, that they have been declared by ORS 569-350 to be a menace to public welfare. Steps leading to eradication, where possible, and intensive control are necessary. It is further recognized that the responsibility for eradication and intensive control rests not only on the private landowner and operator, but also on the county, state, and federal government.

## Weed Control Policy

Therefore, it shall be the policy of ODA to:

1. Assess non-native plants through risk assessment processes and make recommendations to the State Weed Board for potential listing.
2. Rate and classify weeds at the state level.
3. Prevent the establishment and spread of listed noxious weeds.
4. Encourage and implement the control or containment of infestations of listed noxious weed species and, if possible, eradicate them.
5. Develop and manage a biological weed control program.
6. Increase awareness of potential economic losses and other undesirable effects of existing and newly invading noxious weeds, and to act as a resource center for the dissemination of information.
7. Encourage and assist in the organization and operation of noxious weed control programs with government agencies and other weed management entities.
8. Develop partnerships with county weed control districts, universities, and other cooperators in the development of control methods.
9. Conduct statewide noxious weed surveys and weed control efficacy studies.

## Weed Classification System

The purpose of this Classification System is to:

1. Act as the ODA's official guideline for prioritizing and implementing noxious weed control projects.
2. Assist the ODA in the distribution of available funds through Oregon State Weed Board to assist county weed programs, cooperative weed management groups, private landowners, and other weed management entities.
3. Serve as a model for private and public sectors in developing noxious weed classification systems that aid in setting effective noxious weed control strategies.

## Criteria for Determining Economic and Environmental Significance of Noxious Weeds is Based Upon:

### Detrimental Effects

1. A plant species that causes or has the potential to cause severe negative impacts to Oregon's agricultural economy and natural resources.
2. A plant species that has the potential to or does endanger native flora and fauna by its encroachment into forest, range, and conservation areas.
3. A plant species that has the potential or does hamper the full utilization and enjoyment of recreational areas.
4. A plant species that is poisonous, injurious, or otherwise harmful to humans and/or animals.

### Plant Reproduction

1. A plant that reproduces by seed capable of being dispersed over wide areas or that is long-lived, or produced in large numbers.
2. A plant species that reproduces and spreads by tubers, creeping roots, stolons, rhizomes, or other natural vegetative means.

### Distribution

1. A weed of known economic importance which occurs in Oregon in small enough infestations to make eradication/containment possible; or not known to occur, but its presence in neighboring states makes future occurrence seem imminent.
2. A weed of economic or ecological importance and of limited distribution in Oregon.
3. A weed that has not infested the full extent of its potential habitat in Oregon.

### Difficulty of Control

A plant species that is not easily controlled with current management practices such as chemical, cultural, biological, and physical methods.



## Noxious Weed Control Classification Definitions

Noxious weeds, for the purpose of this system, shall be listed as either A or B, and may also be designated as T, which are priority targets for control, as directed by the Oregon State Weed Board.

- **A Listed 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, but its presence in neighboring states make future occurrence in Oregon seem imminent (Table I).

Recommended action: Infestations are subject to eradication or intensive control when and where found.

- **B Listed Weed:**

A weed of economic importance which is regionally abundant, but which may have limited distribution in some counties (Table II).

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.

- **T Designated Weed (T):**

A designated group of weed species that are selected and will be the focus for prevention and control by the Noxious Weed Control Program. Action against these weeds will receive priority. T designated noxious weeds are determined by the Oregon State Weed Board and directs ODA to develop and implement a statewide management plan. T designated noxious weeds are species selected from either the A or B list.

Table I: A Listed Weeds

Common Name	Scientific Name
African rue (T)	<i>Peganum harmala</i>
Cape-ivy (T)	<i>Delairea odorata</i>
Camelthorn	<i>Alhagi pseudalhagi</i>
Coltsfoot	<i>Tussilago farfara</i>
Cordgrass	
Common (T)	<i>Spartina anglica</i>
Dense-flowered (T)	<i>Spartina densiflora</i>
Saltmeadow (T)	<i>Spartina patens</i>
Smooth (T)	<i>Spartina alterniflora</i>
Common frogbit	<i>Hydrocharis morsus-ranae</i>
European water chestnut	<i>Trapa natans</i>
Flowering rush (T)	<i>Butomus umbellatus</i>
Garden yellow loosestrife (T)	<i>Lysimachia vulgaris</i>
Giant hogweed (T)	<i>Heracleum mantegazzianum</i>
Goatgrass	
Barbed (T)	<i>Aegilops triuncialis</i>
Ovate	<i>Aegilops ovata</i>
Goatsrue (T)	<i>Galega officinalis</i>
Hawkweed	
King-devil	<i>Pilosella piloselloides</i> (Hieracium)
Mouse-ear (T)	<i>Pilosella pilosella</i> (Hieracium)
Orange (T)	<i>Pilosella aurantiacum</i> (Hieracium)
Yellow (T)	<i>Pilosella floribundum</i> (Hieracium)
Hoary alyssum (T)	<i>Berteroa incana</i>
Hydrilla	<i>Hydrilla verticillata</i>
Japanese dodder	<i>Cuscuta japonica</i>
Kudzu (T)	<i>Pueraria lobata</i>
Matgrass (T)	<i>Nardus stricta</i>
Oblong spurge (T)	<i>Euphorbia oblongata</i>
Paterson's curse (T)	<i>Echium plantagineum</i>
Purple nutsedge	<i>Cyperus rotundus</i>
Ravennagrass (T)	<i>Saccharum ravennae</i>
Silverleaf nightshade	<i>Solanum elaeagnifolium</i>
West Indian spongeplant	<i>Limnobia laevigatum</i>

(T) T Designated Weed (See page 4)

(Continued)

Table I: A Listed Weeds

Common Name	Scientific Name
Squarrose knapweed (T)	<i>Centaurea virgata</i>
Starthistle	
Iberian (T)	<i>Centaurea iberica</i>
Purple (T)	<i>Centaurea calcitrapa</i>
Syrian bean-caper	<i>Zygophyllum fabago</i>
Thistle	
Plumeless (T)	<i>Carduus acanthoides</i>
Smooth distaff	<i>Carthamus baeticus</i>
Taurian (T)	<i>Onopordum tauricum</i>
Wetted (Curly plumeless) (T)	<i>Carduus crispus</i>
Woolly distaff (T)	<i>Carthamus lanatus</i>
Water soldiers	<i>Stratiotes aloides</i>
White bryonia	<i>Bryonia alba</i>
Yellow floating heart (T)	<i>Nymphoides peltata</i>
Yellowtuft (T)	<i>Alyssum murale</i> , <i>A. corsicum</i>

(T) T Designated Weed (See page 4)

Table II: B Listed Weeds

Common Name	Scientific Name
Armenian (Himalayan) blackberry	<i>Rubus armeniacus</i> ( <i>R. procerus</i> , <i>R. discolor</i> )
Biddy-biddy	<i>Acaena novae-zelandiae</i>
Broom French* Portuguese (T) Scotch* Spanish	<i>Genista monspessulana</i> <i>Cytisus striatus</i> <i>Cytisus scoparius</i> <i>Spartium junceum</i>
Buffalobur	<i>Solanum rostratum</i>
Butterfly bush	<i>Buddleja davidii</i> ( <i>B. variabilis</i> )
Common bugloss (T)	<i>Anchusa officinalis</i>
Common crupina	<i>Crupina vulgaris</i>
Common reed	<i>Phragmites australis</i> ssp. <i>australis</i>
Creeping yellow cress	<i>Rorippa sylvestris</i>
Cutleaf teasel	<i>Dipsacus laciniatus</i>
Dodder	<i>Cuscuta</i> spp.
Dyer's woad	<i>Isatis tinctoria</i>
Ivy Atlantic English	<i>Hedera hibernica</i> <i>Hedera helix</i>
Eurasian watermilfoil	<i>Myriophyllum spicatum</i>
False brome	<i>Brachypodium sylvaticum</i>
Field bindweed* (T)	<i>Convolvulus arvensis</i>
Garlic mustard (T)	<i>Alliaria petiolata</i>
Geranium Herb Robert Shiny leaf geranium	<i>Geranium robertianum</i> <i>Geranium lucidum</i>
Gorse* (T)	<i>Ulex europaeus</i>
Halogeton	<i>Halogeton glomeratus</i>
Houndstongue	<i>Cynoglossum officinale</i>
Indigo bush	<i>Amorpha fruticosa</i>
Johnsongrass	<i>Sorghum halepense</i>
Jointed goatgrass	<i>Aegilops cylindrica</i>
Jubata grass	<i>Cortaderia jubata</i>

\* Targeted for biocontrol

(T) T Designated Weed (See page 4)



(Continued)

Table II: B Listed Weeds

Common Name	Scientific Name
Knapweed	
Diffuse*	<i>Centaurea diffusa</i>
Meadow*	<i>Centaurea pratensis</i>
Russian*	<i>Acroptilon repens</i>
Spotted* (T)	<i>Centaurea stoebe</i> ( <i>C. maculosa</i> )
Knotweed	
Giant	<i>Fallopia sachalinensis</i> ( <i>Polygonum</i> )
Himalayan	<i>Polygonum polystachyum</i>
Japanese	<i>Fallopia japonica</i> ( <i>Polygonum</i> )
Kochia	<i>Kochia scoparia</i>
Lesser celandine	<i>Ranunculus ficaria</i>
Meadow hawkweed (T)	<i>Pilosella caespitosum</i> ( <i>Hieracium</i> )
Mediterranean sage	<i>Salvia aethiopis</i>
Medusahead rye	<i>Taeniatherum caput-medusae</i>
Old man's beard	<i>Clematis vitalba</i>
Parrot feather	<i>Myriophyllum aquaticum</i>
Perennial peavine	<i>Lathyrus latifolius</i>
Perennial pepperweed (T)	<i>Lepidium latifolium</i>
Pheasant's eye	<i>Adonis aestivalis</i>
Poison hemlock	<i>Conium maculatum</i>
Policeman's helmet	<i>Impatiens glandulifera</i>
Puncturevine*	<i>Tribulus terrestris</i>
Purple loosestrife*	<i>Lythrum salicaria</i>
Ragweed	<i>Ambrosia artemisiifolia</i>
Ribongrass (T)	<i>Phalaris arundinacea</i> var. <i>Picta</i>
Rush skeletonweed* (T)	<i>Chondrilla juncea</i>
Saltcedar* (T)	<i>Tamarix ramosissima</i>
Small broomrape	<i>Orbanche minor</i>
South American waterweed	<i>Egeria densa</i> ( <i>Elodea</i> )
Spanish heath	<i>Erica lusitanica</i>
Spikeweed	<i>Hemizonia pungens</i>
Spiny cocklebur	<i>Xanthium spinosum</i>
Spurge laurel	<i>Daphne laureola</i>

\* Targeted for biocontrol

(T) T Designated Weed (See page 4)

(Continued)

Table II: B Listed Weeds

Common Name	Scientific Name
Spurge	
Leafy* (T)	<i>Euphorbia esula</i>
Myrtle	<i>Euphorbia myrsinites</i>
St. Johnswort*	<i>Hypericum perforatum</i>
Sulfur cinquefoil	<i>Potentilla recta</i>
Swainsonpea	<i>Sphaerophysa salsula</i>
Tansy ragwort* (T)	<i>Senecio jacobaea</i> ( <i>Jacobaea vulgaris</i> )
Thistle	
Bull*	<i>Cirsium vulgare</i>
Canada*	<i>Cirsium arvense</i>
Italian	<i>Carduus pycnocephalus</i>
Milk*	<i>Silybum marianum</i>
Musk*	<i>Carduus nutans</i>
Scotch	<i>Onopordum acanthium</i>
Slender-flowered*	<i>Carduus tenuiflorus</i>
Toadflax	
Dalmatian* (T)	<i>Linaria dalmatica</i>
Yellow*	<i>Linaria vulgaris</i>
Tree of heaven	<i>Ailanthus altissima</i>
Velvetleaf	<i>Abutilon theophrasti</i>
Primrose Willow	
Large-flower (T)	<i>Ludwigia grandiflora</i>
Floating (T)	<i>Ludwigia hexapetala</i>
Water primrose (T)	<i>Ludwigia peploides</i>
Whitetop	
Hairy	<i>Lepidium pubescens</i>
Lens-podded	<i>Lepidium chalepensis</i>
Whitetop (hoary cress)	<i>Lepidium draba</i>
Yellow archangel	<i>Lamiastrum galeobdolon</i>
Yellow flag iris	<i>Iris pseudacorus</i>
Yellow nutsedge	<i>Cyperus esculentus</i>
Yellow starthistle*	<i>Centaurea solstitialis</i>

\* Targeted for biocontrol

(T) T Designated Weed (See page 4)



# Oregon

Department  
of Agriculture

## **Attachment G: Wildlife Monitoring and Mitigation Plan**

# **Wheatridge Wind Energy Project**

## **Draft**

### **Wildlife Monitoring and Mitigation Plan**

**Prepared for:**  
**Wheatridge Wind Energy, LLC**  
245 W. Main Street, Suite 200  
Ione, Oregon 97843

**Prepared by:**



**Northwest Wildlife Consultants, Inc.**  
815 NW 4<sup>th</sup> St.  
Pendleton, Oregon 97801

**December 14, 2014**

**Updated by:**



**Tetra Tech, Inc.**  
1750 SW Harbor Way, Suite 400  
Portland, Oregon 97201

**June 2019**



This page intentionally left blank

## Table of Contents

1.0	Introduction .....	1
2.0	Fatality Monitoring – Wind Facility .....	2
2.1	Definitions and Methods .....	2
2.1.1	Seasons .....	2
2.1.2	Search Plots.....	3
2.1.3	Scheduling .....	3
2.1.4	Sample Size.....	3
2.1.5	Duration of Fatality Monitoring.....	4
2.2	Removal Trials.....	4
2.3	Searcher Efficiency Trials .....	5
2.4	Fatality Monitoring Search Protocol .....	6
2.5	Incidental Finds and Injured Birds .....	8
2.6	Statistical Methods for Fatality Estimates (Shoenfeld Estimator).....	8
2.6.1	Definition of Variables.....	8
2.6.2	Observed Number of Carcasses .....	9
2.6.3	Estimation of Carcass Removal.....	9
2.6.4	Estimation of Observer Detection Rates .....	10
2.6.5	Estimation of Facility-Related Fatality Rates.....	10
2.7	Nocturnal Migrant and Bat Fatalities.....	10
2.8	Fatality Monitoring – Solar Facility .....	12
3.0	Raptor Nest Surveys .....	12
3.1	Short-Term Monitoring .....	13
3.2	Long-Term Monitoring .....	13
4.0	Wildlife Reporting and Handling System .....	14
4.1	Data Reporting .....	14
4.2	Amendment of the Plan .....	15

This page intentionally left blank

## **1.0 Introduction**

The Wheatridge Wind Energy Facility (Facility) is an approved, but not yet constructed, wind energy generation facility consisting of up to 292 turbines with a peak generating capacity of up to 500 megawatts (MW), located in an Approved Site Boundary of approximately 13,097 acres in Morrow and Umatilla counties, Oregon. As part of Request for Amendment 4 (RFA 4) to the Facility Site Certificate through the Energy Facility Siting Council (EFSC), Wheatridge Wind Energy, LLC (Certificate Holder) is proposing to add up to 150 MW of photovoltaic solar energy generation to the Facility to provide the opportunity for an integrated, renewable energy facility with both wind and solar energy generation and energy storage. RFA 4 would expand the Approved Site Boundary by 2,294.3 acres (to a total of 14,264.3 acres) to provide for solar generation and energy storage facilities. A detailed Facility description can be found in Exhibit B of the Facility Application for Site Certificate (ASC) and RFA 4, and detailed maps of the Facility site boundary and associated and supporting facilities can be found in Exhibit C.

This document provides primary concepts for meeting the operations phase wildlife monitoring and mitigation needs and will be finalized by the Oregon Department of Energy (ODOE) into a formal Wildlife Monitoring and Mitigation Plan (WMMP). The WMMP will take into account monitoring recommendations from the Oregon Department of Fish and Wildlife (ODFW) and the United States Fish and Wildlife Service (USFWS).

The concepts provided herein are consistent with approved plans in place for other Oregon wind projects, in particular those that are permitted through the State process and the Energy Facility Siting Council. For most such plans in the Oregon Columbia Plateau, the objective has been to provide information useful for determining the impacts of construction and operation of wind energy facilities on wildlife in general—and on birds and bats in particular. As a result of such studies, a wealth of information is available, and the species and relative proportions of birds and bats impacted by wind development in the Oregon Columbia Plateau is now well established.

For this reason, and because multiple-species monitoring has often led to a suboptimal understanding of impacts to particular species of special conservation concern, the USFWS has established guidelines (USFWS, 2012) to facilitate the identifying and addressing such species and the potential impacts to them. For the Facility, pre- construction information reviews and field investigations (Gerhardt et al., 2014) followed those guidelines, as did subsequent siting and micrositing of facilities (Exhibits P and Q of the Wheatridge ASC and RFA 4). The conclusion of this process led to discussions with USFWS centering on the potential risk of the Facility to golden eagle, discussions that likely will lead to an Eagle Conservation Plan and an Eagle Take Permit. In that case, the methods described in this WMMP (especially fatality monitoring and mitigation) may—prior to the beginning of construction of the Facility—be tailored specifically to golden eagles and other large raptors.

This plan describes wildlife monitoring that the Certificate Holder shall conduct during operation of the Facility. Monitoring objectives of the formal study are to determine whether the facility causes significant fatalities of birds and bats and to determine whether the facility results in a loss of

habitat quality. Objectives of continued recording, handling and reporting of incidentally discovered injured or dead wildlife are to meet the standards specified in any other requirement (federal, state, county) for understanding and documenting species found over time.

For the formal study, the Certificate Holder shall use experienced and properly trained personnel (the “investigators”) to conduct the monitoring required under this plan. The professional qualifications of the investigators are subject to approval by the ODOE. For all components of this plan except the life-of-project Wildlife Reporting and Handling System, the Certificate Holder shall hire independent third-party investigators (not employees of the Certificate Holder) to perform monitoring tasks.

The Wildlife Monitoring and Mitigation Plan for the Facility has the following components:

1. Fatality monitoring program including:
  - a. Removal trials
  - b. Searcher efficiency trials
  - c. Fatality search protocol
  - d. Statistical analysis
2. Raptor nesting surveys
3. Wildlife Reporting and Handling System

Component #1 is of shorter duration whereas #2 is periodic for a longer period and #3 if for the life of the Facility. 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 the Department 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 Fatality Monitoring – Wind Facility**

### **2.1 Definitions and Methods**

#### **2.1.1 Seasons**

This plan uses the following dates for defining seasons:



<b>Season</b>	<b>Dates</b>
Spring Migration	March 16 to May 15
Summer/Breeding	May 16 to August 15
Fall Migration	August 16 to October 31
Winter	November 1 to March 15

### ***2.1.2 Search Plots***

The investigators shall conduct fatality monitoring within search plots. The Certificate Holder, in consultation with the Oregon Department of Fish and Wildlife, 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.

### ***2.1.3 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).

In each monitoring year, the investigators shall conduct fatality monitoring searches at the rates of frequency shown below. Over the course of one monitoring year, the investigators will conduct 16 searches, as follows:

<b>Season</b>	<b>Frequency</b>
Spring Migration	2 searches per month (4 searches)
Summer/Breeding	1 search per month (3 searches)
Fall Migration	2 searches per month (5 searches)
Winter	1 search per month (4 searches)

### ***2.1.4 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.

### ***2.1.5 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 1(g) of this plan and with comparable data from other wind power facilities in the Columbia Basin, as available. If the fatality rates for the first year of monitoring at the Facility do not exceed any of the thresholds of concern and are within the range of the fatality rates found at other wind power facilities in the region, then the investigators will perform a second year of monitoring in Year 5 of operations.

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.

## **2.2 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 above 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 the Department. 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, 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 trial carcasses are available, trials during the fall season will

include several small brown birds 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 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.

### **2.3 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 above 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 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.

Efficiency trials will be spread over the entire season to incorporate effects of varying weather and vegetation growth. 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 (thrown over the shoulder), (2) hidden to simulate a crippled bird or (3) partially hidden.

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 4 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.

## **2.4 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 two or three structures (turbine, power pole, fence, building or overhead line) and the approximate distance from the carcass to these structures. 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. When assessment of the carcass is complete, all traces of it will be removed from the site.

Each carcass will be bagged and frozen for future reference and possible necropsy 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. For each carcass found, searchers will record species, sex and age when possible, date and time collected, location, condition (e.g., intact, scavenged, feather spot) and any comments that may indicate cause of death. 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. The certificate holder shall coordinate collection of state endangered, threatened, sensitive or other state protected species with ODFW. The Certificate Holder shall coordinate collection of federally listed endangered or threatened species and Migratory Bird Treaty Act protected avian species with the U.S. Fish and Wildlife Service. The Certificate Holder shall obtain appropriate collection permits from ODFW and USFWS.

The investigators shall calculate fatality rates using the statistical methods described in Section (f), except that the investigators may use different notation or methods that are mathematically equivalent with prior approval of ODOE. In making these calculations, the investigators may exclude carcass data from the first search 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 based on blind necropsy results. 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 eight categories: (1) all birds, (2) small birds, (3) large birds, (4) raptors, (5) grassland birds, (6) nocturnal migrants, (7) state and federally listed threatened and endangered species and State Sensitive Species listed



under OAR 635-100-0040 and (8) bats. The Certificate Holder shall report annual fatality rates on both a per-MW and per-turbine basis.

## **2.5 Incidental Finds and Injured Birds**

The searchers might discover carcasses incidental to formal carcass searches (e.g., while driving within the project area). For each incidentally discovered carcass, the searcher shall identify, photograph, record data and collect the carcass as would be done for carcasses within the formal search sample during scheduled searches. If the incidentally discovered carcass is found within a formal search plot, the fatality data will be included in the calculation of fatality rates. If the incidentally discovered carcass is found outside a formal search plot, the data will be reported separately. The Certificate Holder shall coordinate collection of incidentally discovered state endangered, threatened, sensitive or other state protected species with ODFW. The Certificate Holder shall coordinate collection of incidentally discovered federally-listed endangered or threatened species and Migratory Bird Treaty Act protected avian species with the USFWS.

The Certificate Holder shall develop and follow a protocol for handling injured birds. Any injured native birds found on the facility site will be carefully captured by a trained project biologist or technician and transported to a qualified rehabilitation specialist approved by ODOE.<sup>1</sup> 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.

## **2.6 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.<sup>2</sup>
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.

### **2.6.1 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

---

<sup>1</sup> Approved specialists include Lynn Tompkins (wildlife rehabilitator) 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.

<sup>2</sup> 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)

### 2.6.2 Observed Number of Carcasses

The estimated average number of carcasses ( $\bar{c}$ ) observed per turbine per year is:

$$\bar{c} = \frac{\sum_{i=1}^n c_i}{k}$$

### 2.6.3 Estimation of Carcass Removal

Estimates of carcass removal are used to adjust carcass counts for removal bias. Mean carcass removal time ( $t$ ) 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.

### 2.6.4 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.

### 2.6.5 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:

$$\hat{\pi} = \frac{\bar{t} \cdot p}{I} \cdot \left[ \frac{\exp(I/\bar{t}) - 1}{\exp(I/\bar{t}) - 1 + p} \right]$$

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.

## 2.7 Nocturnal Migrant and Bat Fatalities

Differences in observed nocturnal migrant and bat fatality rates for lit turbines, unlit turbines that are adjacent to lit turbines and unlit turbines that are not adjacent to lit turbines will be compared graphically and statistically.

The Certificate Holder shall use a worst-case analysis to resolve any uncertainty in the 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.”<sup>3</sup> 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. Based on current knowledge of the species that are likely to use the habitat in the area of the facility, the following thresholds apply to the Facility:

Species Group	Threshold of Concern (fatalities per MW)
Raptors (All eagles, hawks, falcons and owls, including burrowing owls.)	0.09
Raptor species of special concern (Swainson’s hawk, ferruginous hawk, peregrine falcon, golden eagle, bald eagle, burrowing owl.)	0.06
Grassland species (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. This may take into consideration whether the mitigation required or provided in conjunction with raptor nest monitoring, habitat mitigation, or other

<sup>3</sup> 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.”

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 the Council. 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 the Council.

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.

## **2.8 Fatality Monitoring – Solar Facility**

The Certificate Holder will consult with the ODOE and ODFW to confirm the extent of fatality monitoring that should be conducted for the solar facility.

## **3.0 Raptor Nest Surveys**

The objectives of raptor nest surveys are: (1) to estimate the size of the local breeding populations of raptor species that nest 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, golden eagle, ferruginous hawk and burrowing owl.

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.



### **3.1 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 4. 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 ½ mile from the facility site. “Nesting success” means that the young have successfully fledged (the young are independent of the core nest site).

### **3.2 Long-Term Monitoring**

In addition to the two years of post-construction raptor nest surveys described in Section 2(a), the investigators shall conduct long-term raptor nest surveys at 5-year intervals for the life of the facility.<sup>4</sup> 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 above in Section 2(a) 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.

---

<sup>4</sup> 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.

## **4.0 Wildlife Reporting and Handling System**

The Wildlife Reporting and Handling System (WRHS) is a monitoring program to search for and handle avian and bat casualties found by maintenance personnel during operation of the facility. 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 (“incidental finds”).

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. The project biologist (or the project biologist’s experienced wildlife technician) will collect the carcass or will instruct maintenance personnel to have an on-site carcass handling permittee collect the carcass. The Certificate Holder’s on-site carcass handling permittee must be a person who is listed on state and federal scientific or salvage collection permits and who is available to process (collect) the find on the day it is discovered. The find must be processed on the same day as it is discovered.

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.

The maintenance personnel will notify a project biologist. The project biologist will collect the carcass or will instruct maintenance personnel to have an on-site carcass handling permittee collect the carcass. As stated above, the on-site permittee must be available to process the find on the day it is discovered. The Certificate Holder shall coordinate collection of state endangered, threatened, sensitive or other state protected species with ODFW. The Certificate Holder shall coordinate collection of federally-listed endangered or threatened species and Migratory Bird Treaty Act protected avian species with the USFWS.

### **4.1 Data Reporting**

The Certificate Holder will report wildlife monitoring data and analysis to the 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 immediately if any federal or state endangered or threatened species are killed or injured on the facility site.

## **4.2 Amendment of the Plan**

This Wildlife Monitoring and Mitigation Plan may be amended from time to time by agreement of the Certificate Holder and the Council. Such amendments may be made without amendment of the site certificate. The Council authorizes ODOE to agree to amendments to this plan and to mitigation actions that may be required under this plan. ODOE shall notify the Council of all amendments and mitigation actions, and the Council retains the authority to approve, reject or modify any amendment of this plan or mitigation action agreed to by ODOE.