

**Agenda Item M - Attachment 4:**

**Amended Proposed Order**

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

|  
In the Matter of Request for Amendment 4 for the  
Summit Ridge Wind Farm Site Certificate

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)  
) AMENDED PROPOSED ORDER ON  
) REQUEST FOR AMENDMENT 4 TO  
) THE SITE CERTIFICATE

July 3, 2019

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## I. INTRODUCTION

The Oregon Department of Energy (Department or ODOE) issues this amended proposed order, in accordance with Oregon Revised Statute (ORS) 469.405(1) and Oregon Administrative Rule (OAR) 345-027-0071, based on its review of Request for Amendment 4 (amendment request or RFA4) to the Summit Ridge Wind Farm site certificate, as well as comments and recommendations received by specific state agencies, local and Tribal governments, and members of the public during the draft proposed order comment period and comments received from the Energy Facility Siting Council (Council or EFSC) following its review of the draft proposed order at the February 22 and March 22, 2019 Council meetings. The certificate holder is Summit Ridge Wind, LLC (Summit Ridge or certificate holder) which is wholly owned by Pattern Energy Group 2 LP.

The certificate holder requests that Council approve changes to the site certificate to extend the construction commencement and completion deadlines. In accordance with the existing site certificate, construction must have begun by August 19, 2018 and be completed by August 19, 2021.<sup>1</sup> The amendment requests that the construction deadlines be extended by two years; the amendment requests that the construction commencement deadline be extended to August 19, 2020 and that the construction completion deadline be extended to August 19, 2023. For amendments requesting to extend construction deadlines, the Department and Council evaluate whether there have been “changes in fact or law” since the site certificate or amended site certificate was issued to determine whether, based on changes in fact or law, the facility would continue to satisfy requirements of the standard.<sup>2</sup>

Based upon review of this amendment request, in conjunction with comments received by members of the public and recommendations received by state agencies and local governments, the Department recommends that the Council issue a fourth amended site certificate for the Summit Ridge Wind Farm, subject to the existing and recommended amended conditions set forth in this proposed order.

This is an amended proposed order. The Department’s initial proposed order was issued on April 2, 2019. At the same time, the Department issued a notice of the opportunity to request a contested case on that initial proposed order. Only those persons who commented on the

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<sup>1</sup> The certificate holder submitted the request to extend the construction commencement and completion deadlines before the applicable construction deadlines and therefore satisfies the requirements of OAR 345-027-0085(1), and suspends the deadlines until Council decides on the amendment request.

<sup>2</sup> OAR 345-027-0075(2)(b)

1 record of the draft proposed order were eligible to request a contested case. The opportunity  
2 to request a contested case was open until May 2, 2019. Three parties requested a contested  
3 case, on multiple issues. The Council considered the contested case requests at its May 17,  
4 2019 meeting, held in Condon, Oregon. At that meeting, the Council found that the contested  
5 case requests were properly raised, but that none of the issues justified a contested case.  
6 However, the Council also found that two properly-raised issues would be settled in a manner  
7 satisfactory to the Council with amendments to the proposed order, including modifications to  
8 conditions. Considering the amendments to the proposed order, Council concluded that a  
9 contested case was not justified on any issue, and directed the Department to amend the  
10 proposed order and recirculate. The Council direction is in accordance with OAR 345-027-  
11 0071(10)(b). The specific amendments to findings and conditions, based on Council direction,  
12 are included in Section III.H, *Fish and Wildlife Habitat*. All changes from the initial April 2, 2019  
13 proposed order to this amended proposed order are shown in “track changes” to clearly  
14 delineate the amended sections. Other changes are also included in Section I, *Introduction*, and  
15 II.C, *Council Review Process*, also shown in track changes. In addition, as a separate document,  
16 the Council is issuing an Order Denying the Requests for Contested Case.

17  
18 Issuance of this amended proposed order opens an opportunity for those persons who  
19 commented on the record of the draft proposed order and the certificate holder to request a  
20 contested case proceeding limited to issues related to the amendment to the proposed order.  
21 Those persons who are eligible to request a contested case proceeding will receive a separate  
22 notice from the Department informing them of this opportunity.

23  
24  
25 **I.A. Name and Address of Certificate Holder**

26  
27 Summit Ridge Wind, LLC  
28 c/o Pattern Renewables 2 LP  
29 Pier 1, Bay 3  
30 San Francisco, CA 94111

31  
32 ***Parent Company of the Certificate Holder***

33 Pattern Renewables 2 LP (subsidiary of Pattern Energy Group 2 LP)  
34 Pier 1, Bay 3  
35 San Francisco, CA 94111

36  
37 ***Certificate Holder Contact***

38 Kevin Wetzel  
39 Project Development Manager  
40 Pattern Energy Group 2 LP  
41 Pier 1, Bay 3  
42 San Francisco, CA 94111  
43

## I.B. Description of the Approved Facility

The facility has not yet been constructed. Through the *Final Order on the Application for Site Certificate* (Final Order on ASC), and subsequent three amendments, the Summit Ridge Wind Farm (facility) is approved as a 194.4 megawatt (MW) wind energy generation facility, to be located entirely within Wasco County, Oregon. The facility, as approved, would include up to 72 wind turbines with dimension specifications as follows: blade tip height up to 152 meters (498.7 feet); hub height up to 91 meters (298.5 feet), and a minimum aboveground blade tip clearance of 18 meters (59 feet).

The facility, as approved, would include the following related or supporting facilities:

- **Power collection system**

- Electricity generated from each wind turbine would be transmitted to a collector substation, including up to 49 miles of mostly underground 34.5 kilovolt (kV) collector lines to transmit electricity from the wind turbines to the collector substation. Aboveground collector line segments would be supported by wood H-frame poles, approximately 55 feet in height.

- **Collector substation**

- The collector substation would aggregate collector lines and would step up voltage from 34.5 kV to 230 kV. The collector substation would occupy up to 5 acres, which would be graveled and surrounded by a fence.

- **230 kV transmission line**

- An approximately 8-mile 230 kV transmission line would connect the facility collector substation to a Bonneville Power Administration (BPA) substation; the transmission line would extend northwest of the collector substation for approximately two miles and then traverse another six miles to the west. The transmission line structures would include H-frame poles approximately 70 feet in height and spaced in 800 foot intervals. The transmission line right-of-way is 150 feet in width.

- **Supervisory Control and Data Acquisition (SCADA) System**

- A SCADA system would be linked by fiber optic cables to a central computer in the O&M building and would allow for remote operation of wind turbines. The SCADA system will be linked via fiber optic cables or other means of communication to a central computer in the O&M building. SCADA system wires will be installed in the collector line underground trenches, or overhead as necessary with the collector line.

1       • **Operations and maintenance (O&M) building**

- 2           ○ A 10,000 square foot O&M building would be located within the 5 acre collector  
3           substation site, and would be accompanied by a graveled parking lot and a 300  
4           foot x 300 foot fenced storage area. The O&M building would obtain domestic  
5           water from an onsite well, developed to serve the facility's domestic water  
6           demand.

7  
8       • **Meteorological towers**

- 9           ○ Up to three permanent un-guyed meteorological towers, approximately 80  
10          meters in height, would be installed.

11  
12      • **Access roads**

- 13          ○ Up to 19 miles of new road would be constructed within the site boundary.  
14          During construction, access roads would be 20 feet wide with an additional 10  
15          feet of compacted road shoulders to accommodate crane paths. After  
16          construction, access roads would be restored to a total width of 20 feet.

17  
18      • **Temporary roadway modifications**

- 19          ○ Up to 6 miles of private roads would be upgraded. These roads would be  
20          constructed and managed in the same manner as "access roads," described  
21          above.

22  
23      The facility, as approved, would also include up to six temporary laydown areas used during  
24      construction. Laydown areas would accommodate needs related to the delivery and staging of  
25      wind turbine components. Five of the six temporary laydown areas would be located on  
26      approximately 4 acres and would be graveled. These laydown areas would be restored after  
27      completion of construction. The sixth temporary laydown area would be included within the  
28      permanent 5-acre collector substation and O&M building site.

29  
30      **I.C. Description of Approved Facility Site Location**

31  
32      *Site Boundary*

33  
34      A site boundary, by definition, includes the perimeter of the site of an energy facility, its related  
35      or supporting facilities, all temporary laydown and staging areas and all corridors and  
36      micrositing corridors.<sup>3</sup> The site boundary for the Summit Ridge Wind Farm includes

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<sup>3</sup> OAR 345-001-0010(55)

1 approximately 11,000 acres of private land. As presented in Figure 1: *Facility Regional Location*,  
2 the facility is approved to be located approximately 17 miles southeast of The Dalles and eight  
3 miles east of Dufur.

4  
5 *Micrositing Corridor*  
6

7 A micrositing corridor, by definition, means a continuous area of land within which construction  
8 of facility components may occur, subject to site certificate conditions.<sup>4</sup> Micrositing corridors  
9 are intended to allow some flexibility in specific component locations and design in response to  
10 site-specific conditions and engineering requirements to be determined prior to construction.

11  
12 The Council previously approved a micrositing corridor extending 1,300-feet from locations of  
13 temporary and permanent disturbance. In order to utilize the entirety of the micrositing  
14 corridor, the certificate holder is obligated to satisfy pre-construction survey requirements for  
15 fish and wildlife habitat (Condition 10.7) and potential historic, cultural and archeological  
16 resources (Condition 11.3) in areas within the micrositing corridor where facility components  
17 would be located but that have not yet been surveyed.<sup>5</sup>

18  
19 A site certificate, or amended site certificate is a binding, contractual agreement between the  
20 certificate holder and the State of Oregon, which restricts construction activities to areas within  
21 the site boundary or micrositing corridor. If in order to serve the construction or operational  
22 needs of the energy facility, or related or supporting facilities, the certificate holder intends to  
23 substantially modify an existing road or construct a new road which is considered a related or  
24 supporting facility, the certificate holder must submit and receive Council approval of an  
25 amendment to the site certificate prior to the modification or construction.<sup>6</sup>

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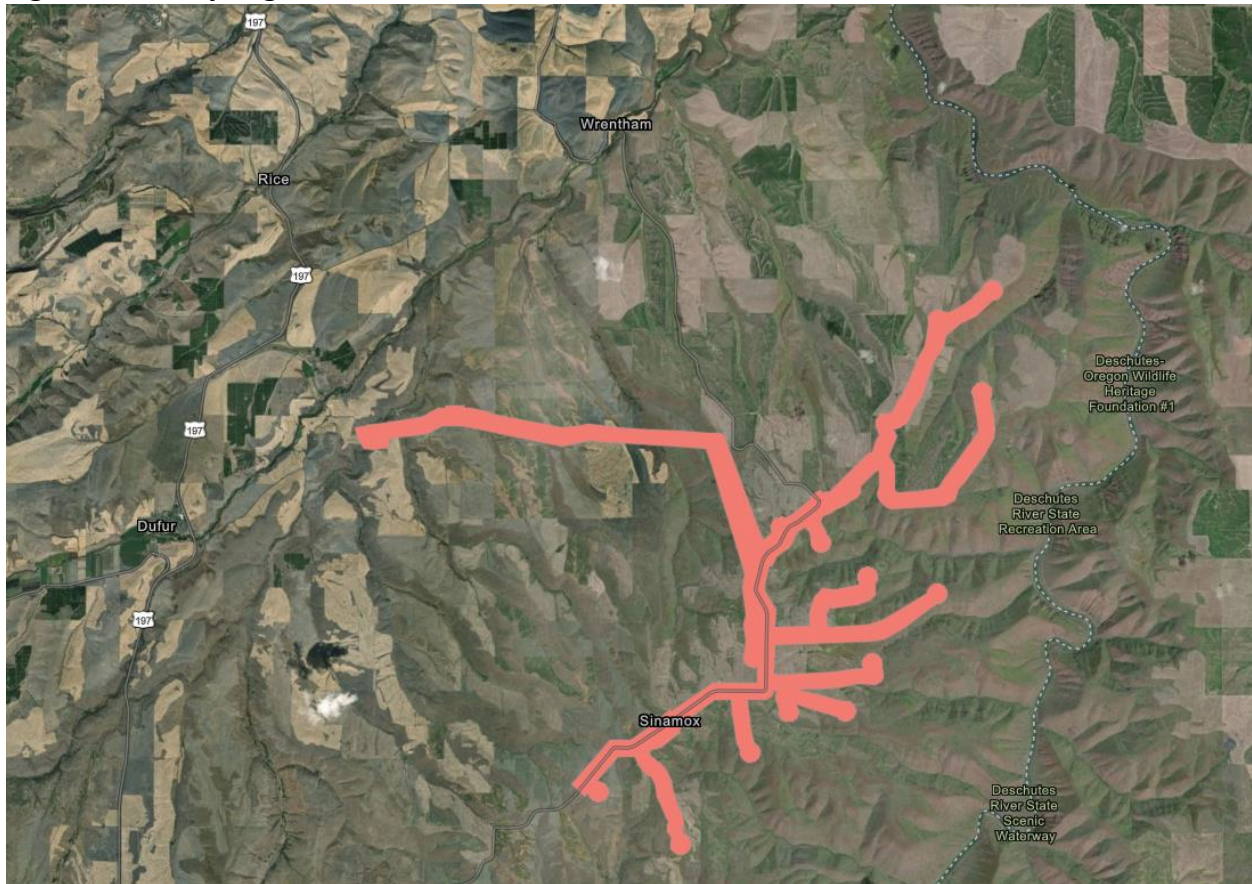
<sup>4</sup> OAR 345-001-0010(32)

<sup>5</sup> The Department provides a summary of previously surveyed areas within each applicable resource section of this order.

<sup>6</sup> SRWAMD4. Draft Proposed Order Public Comment Gilbert. 2019-02-22. On the record of the draft proposed order, as an individual and on behalf of Friends of the Grande Ronde Valley (collectively referred to as Ms. Gilbert) Ms. Gilbert argues that based on the site boundary, new or substantially modified roads required to support facility construction and operation would be needed and have not been included in the site certificate and therefore the Council's General Standard of Review (OAR 345-022-0000) and all other OAR Chapter 345 Division 22 would not be satisfied.



1 **Figure 1: Facility Regional Location**



2  
3 **I.D. Procedural History**

4  
5 The Council issued its *Final Order on the ASC* and granted a site certificate for the Summit Ridge  
6 Wind Farm on August 19, 2011. The Council issued its *Final Order on Amendment 1* and granted  
7 an amended site certificate on August 7, 2015, which approved a construction timeline  
8 extension and allowed flexibility in turbine layout and design. The Council issued its *Final Order*  
9 *on Amendment 2* and granted a second amended site certificate on November 4, 2016, which  
10 approved a transfer of certificate holder ownership, a construction timeline extension,  
11 flexibility in turbine layout and design, and authorized a variance to a road setback requirement  
12 for 17 wind turbines. The Council issued its *Final Order on Amendment 3* and granted a third  
13 amended site certificate on December 15, 2017, which approved a transfer of certificate holder  
14 ownership to the current certificate holder owner and parent company, Pattern Renewables 2  
15 LP.  
16

## **II. AMENDMENT PROCESS**

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

The certificate holder requests an amendment to the site certificate to extend the deadline (1) to begin construction from August 19, 2018 to August 19, 2020, and (2) to complete construction from August 19, 2021 to August 19, 2023.

OAR 345-027-0060(1)(d) requires that the certificate holder provide the specific language for changes in the site certificate, including affected conditions. The certificate holder proposes altering the dates contained within conditions 4.1 and 4.2 to reflect its proposed changes to construction deadlines.

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

Council rules describe the differences in review processes for the Type A and Type B review paths at OAR 345-027-0051.<sup>7</sup> The Type A review is the standard or “default” amendment review process for changes that require an amendment. A key procedural difference between the Type A and Type B review process is that the Type A review requires a public hearing on the draft proposed order, and provides an opportunity to request a contested case proceeding on the Department’s proposed order. Another difference between the Type A and Type B review process relates to the time afforded to the Department in its determination of completeness of the amendment and issuance of the draft proposed order. It is important to note that Council rules authorize the Department to adjust the timelines for these specific procedural requirements, if necessary.

A certificate holder may submit an amendment determination request to the Department for a written determination of whether a request for amendment justifies review under the Type B review process. The certificate holder has the burden of justifying the appropriateness of the Type B review process as described in OAR 345-027-0051(3). The Department may consider,

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<sup>7</sup> SRWAMD4. Draft Proposed Order Public Comments FOCG. 2019-02-22. On the record of the draft proposed order, Friends of the Columbia Gorge (FOCG) assert that because Council’s OAR Chapter 345 Division 27 rules (adopted October 2017) are on appeal at the Oregon Supreme, the amendment request is invalid. While portions of the rules are being challenged in the Oregon Supreme Court, a stay of the rules or any other injunction against using the rules has not been issued. As such, the rules are valid and are applicable to the amendment request, as well as all other amendment requests pending with EFSC at this time. The prior rules were repealed in 2017, and are not applicable to the review of the RFA4.

1 but is not limited to, the factors identified in OAR 345-027-0057(8) when determining whether  
2 to process an amendment request under Type B review.

3  
4 On August 17, 2018, the certificate holder submitted a Type B review amendment  
5 determination request (Type B Review ADR) in conjunction with its preliminary Request for  
6 Amendment 4 (pRFA4). The Type B Review ADR requested that the Department review and  
7 determine whether, based on evaluation of the factors contained within OAR 345-027-0057(8),  
8 the RFA should be reviewed under the Type B review process. On August 23, 2018, the  
9 Department determined that Type A review be maintained due to the insufficiency of the  
10 certificate holder's Type B Review ADR evaluation of OAR 345-027-0057(8) factors. On  
11 September 5, 2018, the certificate holder submitted a supplement to its Type B Review ADR  
12 and requested that the Department re-evaluate its Type A Review determination. On  
13 November 28, 2018, based upon review of the certificate holder's supplemental material and  
14 responses to the Department's Request for Additional Information, the Department  
15 determined that the RFA4 could be reviewed under the Type B review process.

16  
17 Pursuant to OAR 345-027-0063(2), on September 28, 2018, the Department determined pRFA4  
18 to be incomplete and issued a request for additional information.<sup>8</sup> On November 20, 2018, the  
19 Department issued its second request for additional information. The certificate holder  
20 provided responses to the information requests on November 7 and November 30, 2018.

21  
22 After reviewing the responses to its information request, the Department determined the RFA  
23 to be complete on January 10, 2019. Under OAR 345-027-0063(5), an RFA is complete when the  
24 Department finds that a certificate holder has submitted information adequate for the Council  
25 to make findings or impose conditions for all applicable laws and Council standards. On January  
26 16, 2019, the Department posted an announcement on its project website notifying the public  
27 that the complete RFA had been received. The Department issued its DPO on RFA4, under the  
28 Type B process, on January 16, 2019, and opened a public comment period.

29  
30 On February 1, 2019, the certificate holder requested to withdraw the Type B review request  
31 and instead process the RFA under the Type A review process. As such, the Department  
32 reissued its DPO and processed the amendment request in accordance with Type A procedures  
33 at OAR 345-027-0067. The Council held a public hearing on the reissued DPO at is February 22,  
34 2019 EFSC meeting at 10 AM at the Columbia Gorge Discovery Center in The Dalles.

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<sup>8</sup> SRWAMD4Doc5. Incomplete Determination Letter and RAIs. 2018-09-28.



1 All comments previously submitted on the January 16 DPO were valid and are addressed by the  
2 Department in this proposed order on the RFA.

3  
4 Reviewing Agency Comments on Preliminary Request for Amendment 4

5  
6 As presented in Attachment B of the proposed order, the Department received comments on  
7 pRFA4 from the following reviewing agencies:

- 8  
9
  - Oregon Department of Fish and Wildlife
  - Oregon State Historic Preservation Office
  - Oregon Department of Geology and Mineral Industries
  - Wasco County Board of County Commissioners (Special Advisory Group)
  - Wasco County Planning Department
  - Confederated Tribes of the Warm Springs Reservation of Oregon

15  
16 **II.C. Council Review Process**

17  
18 On January 16, 2019 the Department issued the draft proposed order, and a notice of a  
19 comment period on RFA4 and the draft proposed order (notice) under the Type B review  
20 process. The notice was distributed to all persons on the Council's general mailing list, to the  
21 special mailing list established for the facility, to an updated list of property owners supplied by  
22 the certificate holder, and to a list of reviewing agencies as defined in OAR 345-001-0010(52).

23  
24 On February 1, 2019, at the request of the certificate holder, the Department reissued the DPO  
25 under the Type A review process, and a notice of comment period on the RFA4 and the DPO  
26 (notice) on the same day. The notice was distributed to all persons on the Council's general  
27 mailing list, to the special mailing list established for the facility, to an updated list of property  
28 owners supplied by the certificate holder, and to a list of reviewing agencies as defined in OAR  
29 345-001-0010(52). The comment period extended from January 16, 2019 through the close of  
30 the draft proposed order public hearing (11:51 a.m.) at the February 22, 2019 Council meeting.

31  
32 On February 22, 2019, Council Chair Beyeler conducted a public hearing on the draft proposed  
33 order in The Dalles, Oregon.<sup>9</sup> The record of the public hearing closed on February 22, 2019 at  
34 the conclusion of the public hearing, as provided in the public notice of the draft proposed  
35 order. The Council reviewed the draft proposed order and comments received on the record of

---

<sup>9</sup> SRWAMD4. Draft Proposed Order Public Comments FOCG. 2019-02-22. On the record of the draft proposed

1 the public hearing at its regularly scheduled Council meeting on February 22, 2019 and March  
2 22, 2019.

3  
4 The Department received approximately 900 comments on the record of the draft proposed  
5 order. Attachment C of this proposed order includes an index presenting date comment  
6 received, commenter name and organization. Issues raised that are within the Council's  
7 jurisdiction and related to the amendment request are addressed under the applicable  
8 standards section below.

9  
10 On February 20, 2019, the Department provided Council copies of all distinct comments that  
11 had been received to date. On February 22, 2019 at 7:30 a.m., prior to the draft proposed order  
12 public hearing, the Department provided Council electronic access to a complete set of  
13 comments, which was again updated on February 25, 2019 based on all comments received  
14 through the close of the draft proposed order public hearing (which occurred at 11:51 a.m. on  
15 February 22, 2019), as posted to its project website. All comments received on the record of  
16 the DPO have been transmitted to Council.<sup>10</sup>

17  
18 The comments related, in pertinent part, to issues including: (1) the "need" for the deadline  
19 extension; (2) reliance on outdated habitat and species surveys; (3) using best available science  
20 (technologies) to evaluate and mitigate potential impacts to (avian) species; (4) legitimacy of  
21 Department's actions due to pending Oregon Supreme Court review of amendment rules; (5)  
22 significance of wind turbine visibility to the Deschutes River; (6) division 27 procedural rules; (7)  
23 water use; (8) weed management; (9) Wasco County land use zoning ordinances. These issues  
24 are discussed within this proposed order.

25  
26 The Department ~~issues-issued this its initial~~ proposed order on April 2, 2019, taking into  
27 consideration Council comments, any comments received "on the record of the public hearing"  
28 (i.e., oral testimony provided at the public hearing and written comments received by the  
29 Department after the date of the notice of the public hearing and before the close of the public  
30 hearing comment period, including comments submitted on the record of the DPO), including  
31 any comments from reviewing agencies, special advisory groups, and Tribal Governments.  
32 Concurrent with the issuance of the ~~is~~ April 2, 2019 proposed order, the Department also

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order, Friends of the Columbia Gorge note that all comments received on the record must be considered by the  
Council as required by OAR 345-027-0067 and OAR 345-027-0071.

1 issue~~ds~~ a Notice of Opportunity to Request a Contested Case and a public notice of the  
2 proposed order.<sup>11</sup> ~~Only those persons who commented in person or in writing on the record of~~  
3 ~~the public hearing may request a contested case proceeding, unless the Department did not~~  
4 ~~follow the follow the requirements of OAR 345-027-0067, or unless the action recommended in~~  
5 ~~the proposed order differs materially from the draft proposed order, including any~~  
6 ~~recommended conditions of approval, in which case the person may raise only new issues~~  
7 ~~within the jurisdiction of the Council that are related to such differences. Additionally, to raise~~  
8 ~~an issue in a contested case proceeding, the issue must be within Council jurisdiction, and the~~  
9 ~~person must have raised the issue on the record of the public hearing with “sufficient specificity~~  
10 ~~to afford the Council, the Department, and the certificate holder an adequate opportunity to~~  
11 ~~respond to the issue.”<sup>12</sup> If the Council finds that a request for contested case identifies one or~~  
12 ~~more properly raised issues that justify a contested case proceeding, the Council shall conduct a~~  
13 ~~contested case proceeding on the proposed order.~~

14  
15 Only those persons who commented on the record of the draft proposed order were eligible to  
16 request a contested case. The opportunity to request a contested case was open until May 2,  
17 2019. Three parties requested a contested case, on multiple issues. The Council considered the  
18 contested case requests at its May 17, 2019 meeting, held in Condon, Oregon. At that meeting,  
19 the Council found that the contested case requests were properly raised, but that none of the  
20 issues justified a contested case. However, the Council also found that two properly-raised  
21 issues would be settled in a manner satisfactory to the Council with amendments to the  
22 proposed order, including modifications to conditions. Considering the amendments to the  
23 proposed order, Council concluded that a contested case was not justified on any issue, and  
24 directed the Department to amend the proposed order and recirculate. The Council direction is  
25 in accordance with OAR 345-027-0071(10)(b).

26  
27 The Department issues this amended proposed order to address the issues as directed by  
28 Council. The specific amendments to this proposed order based on Council direction are  
29 included in Section III.H, *Fish and Wildlife Habitat*.

30  
31 Issuance of this amended proposed order opens an opportunity for those persons who  
32 commented on the record of the initial draft proposed order and the certificate holder to  
33 request a contested case proceeding limited to issues related to the amendment to the  
34 proposed order. Those persons who are eligible to request a contested case proceeding will  
35 receive a separate notice from the Department informing them of this opportunity.

---

<sup>11</sup> See OAR 345-027-0071.

<sup>12</sup> ~~OAR 345-027-0071(7).~~

Following a contested case proceeding on the amended proposed order, if requested and granted; or if no contested case is requested or if requested but not granted, the Council shall adopt, modify or reject the amended proposed order and will issue a final order approving or denying the site certificate amendment request based upon the applicable laws and Council standards required under OAR 345-027-0075(2) and in effect on the dates described in OAR 345-027-0075(3). The Council's final order is subject to judicial review by the Oregon Supreme Court. Only a party to the contested case proceeding may request judicial review and the issues on appeal are limited to those raised by the parties to the contested case proceeding. A petition for judicial review of the Council's approval or rejection of an application for a site certificate (ASC) or amended site certificate must be filed with the Supreme Court within 60 days after the date of service of the Council's final order or within 30 days after the date of a petition for rehearing is denied or deemed denied.<sup>13</sup>

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

A site certificate amendment is necessary under OAR 345-027-0050(3) because the certificate holder requests to extend the construction beginning and completion deadlines. Additionally, OAR 345-027-0085 imposes specific requirements relating to a request for amendment to extend construction deadlines and OAR 345-027-0075 sets the scope of Council's review. OAR 345-027-0075(2)(b) provides that an amendment, which requests a timeline extension request, must be evaluated "after considering any changes in facts or law since the date the current site certificate was executed." The Council interprets OAR 345-027-0070(10)(b)(B) as requiring the review of any change to facility design as well as any change to the existing environment, or changes in law.

The Type A amendment review process (consisting of OARs 345-027-0059, -0060, -0063, -0065, -0067, -0071 and -0075) shall apply to the Council's review of a request for amendment proposing a change described in OAR 345-027-0050(2), (3), and (4).<sup>14</sup>

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<sup>13</sup> ORS 469.403 and OAR 345-027-0071(12).

<sup>14</sup> OAR 345-027-0051(2).

1  
2 **III. REVIEW OF THE REQUESTED AMENDMENT**  
3

4 Under ORS 469.310, the Council is charged with ensuring that the “siting, construction and  
5 operation of energy facilities shall be accomplished in a manner consistent with protection of  
6 the public health and safety.” ORS 469.401(2) further provides that the Council must include in  
7 the amended site certificate “conditions for the protection of the public health and safety, for  
8 the time for completion of construction, and to ensure compliance with the standards, statutes  
9 and rules described in ORS 469.501 and ORS 469.503.”<sup>15</sup> The Council implements this statutory  
10 framework by adopting findings of fact, conclusions of law, and conditions of approval  
11 concerning the amended facility’s compliance with EFSC standards set forth in OAR Chapter  
12 345, Divisions 22 and 24 as well as all other applicable statutes, rules and standards (including  
13 those of other state or local agencies).  
14

15 **III.A. General Standard of Review: OAR 345-022-0000**  
16

17 *(1) To issue a site certificate for a proposed facility or to amend a site certificate, the*  
18 *Council shall determine that the preponderance of evidence on the record supports the*  
19 *following conclusions:*  
20

21 *(a) The facility complies with the requirements of the Oregon Energy Facility Siting*  
22 *statutes, ORS 469.300 to ORS 469.570 and 469.590 to 469.619, and the standards*  
23 *adopted by the Council pursuant to ORS 469.501 or the overall public benefits of the*  
24 *facility outweigh the damage to the resources protected by the standards the facility*  
25 *does not meet as described in section (2);*  
26

27 *(b) Except as provided in OAR 345-022-0030 for land use compliance and except for*  
28 *those statutes and rules for which the decision on compliance has been delegated by*  
29 *the federal government to a state agency other than the Council, the facility*  
30 *complies with all other Oregon statutes and administrative rules identified in the*  
31 *project order, as amended, as applicable to the issuance of a site certificate for the*  
32 *proposed facility. If the Council finds that applicable Oregon statutes and rules, other*  
33 *than those involving federally delegated programs, would impose conflicting*  
34 *requirements, the Council shall resolve the conflict consistent with the public interest.*  
35 *In resolving the conflict, the Council cannot waive any applicable state statute.*  
36

\* \* \*

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<sup>15</sup> ORS 469.401(2).

*(4) In making determinations regarding compliance with statutes, rules and ordinances normally administered by other agencies or compliance with requirement 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 the facility would continue to comply with the requirements of EFSC statutes and the siting standards adopted by the Council and that the facility would continue to 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 other state agencies as well as the Wasco County Planning Department (reviewing on behalf of the Special Advisory Group - Wasco County Board of County Commissioners) during its review of pRFA4 to aid in the evaluation of whether the facility, with proposed construction deadline extension, would continue to satisfy the requirements of applicable statutes, rules and ordinances otherwise administered by other agencies. Additionally, in many circumstances the Department relies upon these reviewing agencies' special expertise in evaluating compliance with the requirements of Council standards.

OAR 345-022-0000(2) and (3) apply to RFAs where a certificate holder has shown that the proposed amendment cannot meet Council standards or has shown that there is no reasonable way to meet the Council standards through mitigation or avoidance of the damage to protected resources; and, for those instances, establish criteria for the Council to evaluate in making a balancing determination. In RFA4, the certificate holder represents that the facility would continue to meet, with conditions, all applicable Council standards. Therefore, OAR 345-022-0000(2) and (3) would not apply to this review.

#### ***OAR 345-027-0085: Appropriateness of Request for Amendment to Extend Construction Deadlines***

OAR 345-027-0085(1) requires the certificate holder to explain its "need" for the requested deadline extension. The certificate holder explains that the need for the construction deadline

1 extension is to allow adequate time to obtain a power purchase agreement and financing for  
2 the facility.<sup>16</sup>

3  
4 Council rules include no substantive review criteria for which to evaluate the explanation of the  
5 need for an extension. Council is not required to find, and rules do not guide a finding, as to  
6 what constitutes an “acceptable” need for a timeline extension. If the Department were to  
7 determine that the certificate holder failed to meet the OAR 345 Division 27 information  
8 requirement to include an explanation of the need for the extension, then it would determine  
9 the amendment request to be incomplete and request further information during its  
10 completeness review.<sup>17</sup>

11  
12 OAR 345-027-0085(5)(c) provides that “when considering whether to grant a request for  
13 amendment for a deadline extension made under this section, the Council shall consider how  
14 many extensions it has previously granted.” In RFA4, the certificate holder describes that  
15 Council previously approved two deadline extensions and that this request, if approved,  
16 represents the third deadline extension for the facility.

17  
18 Council rules include no substantive review criteria for how the number of previously approved  
19 deadline extension should be evaluated. However, the Council may deny a construction  
20 deadline extension if it were to provide a rationale as to why the “number” of requests is  
21 inappropriate. Because the certificate holder provided the number of previously granted  
22 deadline extensions, as required under OAR 345-027-0085(5)(c), the Department recommends  
23 the Council consider the merits of the amendment request and the certificate holder’s ability to  
24 satisfy the requirements of Council standards and other applicable statutes, rules and  
25 ordinances.

26  
27 OAR 345-027-0085(5) provides that, for facilities approved prior to October 24, 2017,  
28 subsections (3) and (4) of OAR 345-027-0085 do not apply. Subsection (3) specifies that the  
29 Council shall specify new deadlines to complete construction that are the later of either three  
30 years from the previous deadline, or two years from the date the Council grants an amendment

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<sup>16</sup> SRWAMD4Doc17. Request for Amendment 4 2019-01-16, Section 1.3

<sup>17</sup> SRWAMD4. Draft Proposed Order Public Comment FOCG. 2019-02-22. On the record of the draft proposed order, Friends of the Columbia Gorge (FOCG) argue that the certificate holder did not adequately demonstrate a need for the deadline extension because evidence to substantiate the certificate holder’s assertion that additional time was necessary for marketing, negotiations, or procuring of letters of intent, was not provided within the RFA.



1 following a contested case. Subsection (4) indicates that the Council will not grant more than 2  
2 amendments to extend the deadline to begin construction.

3  
4 The Summit Ridge Wind Farm was initially approved prior to October 24, 2017; as such,  
5 subsections (3) and (4) do not apply to this RFA. The Summit Ridge Wind Farm was initially  
6 approved in August of 2011 and the certificate holder was required to begin construction within  
7 3 years. In the *Final Order on Amendment 1*, the construction commencement deadline was  
8 extended from 2014 to 2016. In the *Final Order on Amendment 2*, the construction  
9 commencement deadline was extended from 2016 to 2018. This Request for Amendment to  
10 extend the construction commencement deadline from 2018 until 2020. In summary, if  
11 approved, RFA 4 would result in a construction extensions for a total of 6 years, and the  
12 construction commencement date would be 9 years after the issuance of the initial site  
13 certificate.

14  
15 OAR 345-027-0085(3) and (4) regulates facilities approved for construction after October 24,  
16 2017 (hereinafter referred to as “new rule”). As noted above, a construction deadline may be  
17 extended for a maximum of 6 years under subsections (3) and (4).<sup>18</sup> Under the “old rule,”  
18 (whereby subsections (3) and (4) do not apply, if approved prior to October 24, 2017), there is  
19 no specified maximum allowable time extension. The Department notes that while there is no  
20 maximum allowable time extension for the Summit Ridge facility, given that the current RFA 4  
21 would result in a construction commencement extension of a total of 6 years, the extension  
22 request would allow a timeline to construct the facility consistent with what would be available  
23 to a site certificate holder under the “new rule.”

24  
25 *Site Certificate Expiration [OAR 345-027-0013]*

26  
27 Under OAR 345-027-0013, in order to avoid expiration of the site certificate, the certificate  
28 holder must begin construction of the facility no later than the construction beginning date  
29 specified in the site certificate, unless expiration of the site certificate is suspended pending  
30 final action by the Council on a request for amendment to a site certificate pursuant to OAR  
31 345-027-0085(2). The certificate holder submitted the request to extend the construction

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<sup>18</sup> The new rule allows for 2 construction deadline extensions, at a maximum of 3 years per extension.



1 commencement and completion deadlines before the applicable construction deadlines and  
2 therefore satisfies the requirements of OAR 345-027-0085(1).

3  
4 OAR 345-027-0085(5) authorizes Council to grant construction commencement and completion  
5 deadline extensions of up to two years from the deadlines in effect prior to the Council's  
6 decision on the amendment.<sup>19</sup> In RFA4, the certificate holder requests to amend Conditions 4.1  
7 and 4.2 to extend its construction commencement and completion deadlines by two years, the  
8 maximum extension allowed by rule.

9  
10 In the draft proposed order and the proposed order, the Department recommend~~sed~~ Council  
11 amend Conditions 4.1 and 4.2, as requested by the certificate holder. Recommended amended  
12 Conditions 4.1 and 4.2 are presented in underline/strikethrough below:

13  
14 **Recommended Amended Condition 4.1:** The certificate holder shall begin construction of  
15 the facility by August 19, ~~2018~~ 2020. The Council may grant an extension of the deadline to  
16 begin construction in accordance with OAR 345-027-~~0030~~ 0085 or any successor rule in  
17 effect at the time the request for extension is submitted.

18 [Final Order III.D.1; AMD2; AMD4; Mandatory Condition OAR 345-025-0006(4)]

19  
20 **Recommended Amended Condition 4.2:** The certificate holder shall complete construction  
21 of the facility by August 19, ~~2021~~ 2023. Construction is complete when: 1) the facility is  
22 substantially complete as defined by the certificate holder's construction contract  
23 documents, 2) acceptance testing has been satisfactorily completed; and 3) the energy  
24 facility is ready to begin continuous operation consistent with the site certificate. The  
25 certificate holder shall promptly notify the Department of the date of completion of  
26 construction. The Council may grant an extension of the deadline for completing  
27 construction in accordance with OAR ~~345-027-0030~~ 345-027-0085 or any successor rule in  
28 effect at the time the request for extension is submitted.

29 [Final Order III.D.2; AMD2; AMD4; Mandatory Condition OAR 345-025-0006(4)]

30  
31 *Mandatory Conditions in Site Certificates [OAR 345-025-0006]*

32  
33 OAR 345-025-0006 lists certain conditions that the Council must adopt in every site certificate.  
34 OAR-345-025-0006(3) requires that the certificate holder design, construct, operate and retire  
35 the facility substantially as described in the site certificate. To align with this Mandatory  
36 Condition, Council previously imposed Conditions 2.9 and 5.5 which both establish maximum

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<sup>19</sup> OAR 345-027-0085(5) is specific to facility site certificates approved prior to October 24, 2017.

number of wind turbines; wind turbine dimensions; and, generating capacity of the facility and individual wind turbines.

In the draft proposed order and the proposed order, the Department recommends ~~see~~ Council delete Condition 2.9 from the site certificate due to redundancy with Condition 5.5.

**Recommended Deleted Condition 2.9 [DELETED]:** ~~The certificate holder shall request an amendment of the site certificate to increase the combined peak generating capacity of the facility beyond 194.4 megawatts, to increase the number of wind turbines to more than 72 wind turbines or to install wind turbines with a hub height greater than 91 meters, a blade tip height greater than 152 meters or a blade tip clearance less than 18 meters above ground.~~

[Final Order III.D.7; AMD2; AMD4] [Mandatory Condition OAR 345-025-0006 (3)]

In the draft proposed order, the Department recommended Council amend Condition 5.5 to remove reference to the overall generating capacity as the overall generating capacity of a facility is not specifically relevant to the evaluation of compliance with Council standards or whether an amendment is required.<sup>20</sup> Facility impacts are based on facility design, which includes the number of turbines, turbine hub height, blade tip height, rotor diameter, and blade tip clearance, and does not rely upon the overall facility generating capacity. In the draft proposed order and proposed order, the Department recommends ~~see~~ Condition 5.5 be amended to clarify the specifications of allowable turbines under this site certificate:

**Recommended Amended Condition 5.5:** Before beginning construction, the certificate holder shall provide to the Department a description of the turbine types selected for the facility demonstrating compliance with this condition. The certificate holder may select

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<sup>20</sup> SRWAMD4. Draft Proposed Order Public Comments Gilbert. 2019-02-22. On the record of the draft proposed order, Ms. Gilbert expresses concern that the Department's recommended amended Condition 5.5, as presented in the draft proposed order, including removal of the restriction on the facility generating capacity would be inconsistent with OAR 345-025-0063(3) and ORS 469.407. ORS 469.407 establishes review criteria applicable to certificate holders seeking Council authorization to increase facility generating capacity, but specifically applies to base load gas plants pursuant to ORS 469.407(1) and ORS 469.407(3), and therefore does not apply to the proposed amended condition. Additionally, the Department references the mandatory condition established in rule under OAR 345-025-0006(3) which requires that the certificate holder design, construct, operate and retire the facility in a manner substantially described in the site certificate.

turbines of any type, subject to the following restrictions and compliance with all other site certificate conditions:

a. The total number of turbines at the facility must not exceed 72 turbines.

b. ~~The combined peak generating capacity of the facility must not exceed 194.4 megawatts.~~

b. The turbine hub height must not exceed 91 meters, and the maximum blade tip height must not exceed 152 meters, and the rotor diameter must not exceed 132 meters above grade.

~~c.~~ The minimum blade tip clearance must be 18 meters above ground.

[Final Order III.D.5; AMD2; AMD4] [Mandatory Condition OAR 345-025-0006 (3)]

#### *Site Specific Conditions [OAR 345-025-0010]*

In addition to mandatory conditions imposed in all site certificates, the Council rules also include “site specific” conditions at OAR 345-025-0010 that the Council may include in the site certificate to address issues specific to certain facility types or proposed features of facilities. Because the approved facility includes a 230 kV transmission line, the Council previously imposed Condition 4.5 to align with Site Specific Condition at OAR 345-025-0010(5). OAR 345-025-0010(5) requires that, when a facility includes a transmission line or pipeline, that it be constructed within a Council approved corridor, defined as a continuous area of land not more than one-half mile in width and running the entire length of the transmission or pipeline.<sup>21</sup> Condition 4.5, as previously imposed, established a general restriction limiting construction of wind turbines and the transmission line to locations presented in ASC Exhibit C, but did not specify the length or width of the approved transmission line corridor. In the draft proposed order and proposed order, the Department recommends ~~see~~ Council amend Condition 4.5 to more appropriately align with OAR 345-025-0010(5) and specify the length and width of the previously approved transmission line corridor, as follows:

**Recommended Amended Condition 4.5:** The certificate holder shall construct ~~the turbines and the 230 kV transmission line within a 1,300-foot the corridor locations set forth in Exhibit Attachment C of the application for site certificate,~~ as represented on Figure 1 of the site certificate, subject to the conditions of this site certificate.

[Final Order III.D.8; AMD4] [Mandatory Condition OAR 345-025-000610(5)]

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<sup>21</sup> OAR 345-001-0010(13)

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

The Council has 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 the 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 amended site certificate [OAR 345-025-0006(3)] 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.<sup>22</sup>

OAR 345-026-0048 requires that a certificate holder develop and implement a plan to verify compliance with all site certificate terms and conditions and other applicable statutes and rules. Condition 14.7 imposes this requirement but does not include a timing consideration. In the draft proposed order and proposed order, the Department recommend~~ed~~sed the Council amend the existing condition to clarify that the compliance plan must be submitted at least 90 days prior to beginning construction in order for the Department verify the contents of the plan and to coordinate with other state or local agencies, if necessary, as follows:

**Recommended Amended Condition 14.7:** At least 90 days prior to beginning construction (unless otherwise agreed to by the Department), the certificate holder shall submit to the Department, a compliance plan that documents and demonstrates completed actions or actions to be completed to satisfy the requirements of all terms and conditions of the amended site certificate and applicable statutes and rules. Following receipt of the site certificate or an amended site certificate, tThe certificate holder shall implement the aplan that verifies compliance with all site certificate terms and conditions and applicable statutes and rules. As a part of the compliance plan, to verify compliance with the requirement to begin construction by the date specified in the site certificate, the certificate holder shall report promptly to the Department of Energy when construction begins. Construction is defined in OAR 345-001-0010. In reporting the beginning of construction, the certificate holder shall describe all work on the site performed before beginning construction, including work performed before the Council issued the site certificate, and shall state the cost of that work. For the purpose of this exhibit, “work on the site” means any work within a site or corridor, other than surveying, exploration or other activities to define or characterize the site or corridor. The certificate holder shall document the compliance plan

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<sup>22</sup> Applicable rule requirements established in OAR Chapter 345, Division 26 include OAR 345-026-0005 to OAR 345-026-0170.

and maintain it for inspection by the Department or the Council.  
[Final Order VII.3; AMD4] [OAR 345-026-0048]

#### **Conclusions of Law**

Based on the foregoing findings of fact and conclusions of law, and subject to compliance with the existing and recommended amended conditions, the Department recommends that the Council find that the facility, with the requested extension of the construction deadlines, 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 applicant 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.*

*(4) If the applicant relies on a permit or approval issued to a third party and the third party does not have the necessary permit or approval at the time the Council issues the site certificate, the Council may issue the site certificate subject to the condition that the applicant shall not commence construction or operation as appropriate until the third party has obtained the necessary permit or approval and the applicant has a contract or*

1            *other arrangement for access to the resource or service secured by that permit or*  
2            *approval.*

3  
4    **Findings of Fact**

5  
6    Subsections (1) and (2) of the Council's Organizational Expertise standard require that the  
7    applicant (certificate holder) demonstrate its ability to design, construct, operate, and retire the  
8    facility in compliance with Council standards and all site certificate conditions, in a manner that  
9    protects public health and safety, as well as demonstrate an ability to restore the site to a  
10   useful, non-hazardous condition. The Council may consider the certificate holder's experience  
11   and past performance in the construction, operation and retirement of other facilities in  
12   determining whether the proposal complies with the Council's Organizational Expertise  
13   standard. Subsections (3) and (4) address third party permits.

14  
15   *Compliance with Council Standards and Site Certificate Conditions*

16  
17   The Council may consider a certificate holder's past performance, including but not limited to  
18   the quantity or severity of any regulatory citations in constructing or operating a facility, in  
19   evaluating whether a proposed change may impact the certificate holder's ability to design,  
20   construct and operate a facility in compliance with Council standards and site certificate  
21   conditions.<sup>23</sup>

22  
23   Summit Ridge Wind Farm, LLC is a project-specific LLC, and therefore relies upon the expertise  
24   and experience of its parent company, Pattern Energy Group (PEGLP) as well as its sole limited  
25   partner, Pattern Development, to have the ability to identify and select contractors with the  
26   ability to design, construct, operate and retire the facility in compliance with the Organizational  
27   Expertise standard. The Council acknowledged in its *Final Order on Amendment 3* that PEGLP  
28   had developed, owned, and operated over 4,500 MW of renewable energy generation and also  
29   that it had constructed 19 wind and solar projects.<sup>24</sup> In RFA4, the certificate holder explains that  
30   there have been no changes to its organizational expertise that would impact Council's prior  
31   findings of compliance. The certificate holder also confirms that it has not received any material  
32   regulatory citations since the Council's previous evaluation.

33  
34   Council previously imposed Conditions 5.1, 5.2, 6.1 and 6.31 which require that the certificate  
35   holder provide qualifications of its contractors to the Department for review; contractually

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<sup>23</sup> OAR 345-021-0010(1)(d)(D)

<sup>24</sup> *Final Order on AMD 3* (2017-12-15), p. 9

1 require its contractors to comply with site certificate requirements; and provide the  
2 Department notification of any changes in the certificate holder owner's corporate structure.

3  
4 Based upon the recommended findings presented here and compliance with existing site  
5 certificate conditions, the Department recommends that the Council continue to find that the  
6 certificate holder has the ability to design, construct, operate, and retire the facility in  
7 compliance with Council standards and site certificate conditions.

8  
9 *Public Health and Safety*

10  
11 The certificate holder does not propose any change to facility design; as such, RFA4 does not  
12 present new public health and safety risks. However, the facility could result in public health  
13 and safety risks from proximity to blades and electrical equipment, and potential structural  
14 failure of tower or blades. The certificate holder describes that, during its history of operations,  
15 two blade failure incidents have occurred. The certificate holder assessed the incidents, and  
16 instituted plans and responses to address future risk. The Council previously imposed  
17 conditions 7.1 through 7.13, which relate to public health and safety, as well as Conditions 8.1  
18 through 8.9, which relate to on-site safety and security. This is further discussed in Sections  
19 III.P.1., *Public Health and Safety Standards for Wind Energy Facilities* of this order.

20  
21 Based on the reasoning and analysis provided in the sections described, the Department  
22 recommends the Council continue to find that the certificate holder has the ability to design,  
23 construct, and operate the facility in a manner that protects public health and safety.

24  
25 *Ability to Restore the Site to a Useful, Non-Hazardous Condition*

26  
27 A certificate holder's ability to restore a site to a useful, non-hazardous condition is evaluated  
28 based on its ability to conduct necessary restoration tasks and actions, and to obtain a bond or  
29 letter of credit in the amount necessary for implementation of the identified tasks and actions.  
30 The certificate holder is not proposing to change its facility design; however, based on potential  
31 changes in unit cost and labor rates since the previous retirement cost estimate was prepared,  
32 the certificate holder provides an updated retirement cost estimate of approximately \$9.9  
33 million (4<sup>th</sup> Quarter 2018 dollars) (compared to the previously approved \$6.9 million [in 3<sup>rd</sup> Qtr  
34 dollars] retirement cost estimate).

35  
36 As part of its RFA3, the certificate holder provided a letter from MUFG Union Bank, N.A. (dated  
37 October 20, 2017) stating that there is a reasonable likelihood that the bank would provide a  
38 Letter of Credit of up to ten million dollars (\$10,000,000.00), subject to the bank's satisfactory  
39 review and acceptance of the terms and conditions of the relevant documents as well as



1 internal credit review and approval.<sup>25</sup> Because the 2017 bank letter is reasonably recent (i.e.  
2 less than 2 years old), the Department recommends Council find that the certificate holder  
3 demonstrates a reasonable likelihood of obtaining a bond or letter of credit in the amount  
4 necessary for site restoration and retirement. As described in Section III.G., *Retirement and*  
5 *Financial Assurance*, the Department recommends Council find that the certificate holder  
6 would continue to be able to restore the facility site to a useful, non-hazardous condition.

7  
8 *ISO 9000 or ISO 14000 Certified Program*  
9

10 OAR 345-022-0010(2) is not applicable because the certificate holder has not proposed to  
11 design, construct or operate the amended facility according to an International Organization for  
12 Standardization (ISO) 9000 or ISO 14000 certified program.

13  
14 *Third-Party Permits*  
15

16 OAR 345-022-0010(3) addresses the requirements for potential third party permits. In RFA4,  
17 the certificate holder describes that the proposed changes would not require any additional  
18 state or local government permits or approvals for which the Council would ordinarily  
19 determine compliance but that would instead be issued to a third-party not previously  
20 considered.

21  
22 **Conclusions of Law**  
23

24 Based on the evidence in the record, and subject to compliance with the existing conditions of  
25 approval, the Department recommends that the Council find that the certificate holder would  
26 continue to satisfy the requirements of the Council's Organizational Expertise standard.  
27  
28

---

<sup>25</sup> *Final Order on AMD 3* (2017-12-15), p. 15



**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.*

*(3) The Council may not impose the Structural Standard in section (1) to deny an application for a special criteria facility under OAR 345-015-0310. 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.*

**Findings of Fact**

As provided in section (1) above, the Structural Standard generally requires the Council to evaluate whether the applicant (certificate holder) has adequately characterized the potential seismic, geological and soil hazards of the site, and that the applicant (certificate holder) can design, engineer and construct the facility to avoid dangers to human safety and the

environment from these hazards.<sup>26</sup> Pursuant to OAR 345-022-0020(2), the Council may issue a site certificate for a wind energy facility without making findings regarding compliance with the Structural Standard; however, the Council may apply the requirements of the standard to impose site certificate conditions.

For amendments requesting to extend construction deadlines, the Department and Council evaluate whether there have been “changes in fact or law” since the site certificate or amended site certificate was issued to determine whether, based on changes in fact or law, the facility would continue to satisfy requirements of the standard. The request for amendment does not include changes to the site boundary, facility design, facility layout, or other changes that could impact the certificate holder’s ability to design, engineer, and construct the facility to avoid dangers to human safety and the environment from seismic, geological, and soils hazards.

While the certificate holder’s characterization in ASC Exhibit H of the geological and soil stability of the analysis area remains applicable to Council’s review of this request for amendment, based on questions from DOGAMI related to “long period ground motion,” additional review of certain specific risks from “long-period ground motion” is included in this Order. Furthermore, the OAR Division 21 requirements pertaining to Exhibit H and the Structural Standard were updated by Council in 2017. The rulemaking included, in part, new requirements for a certificate holder to discuss the facility’s disaster resilience as well as the impacts of future climate condition to the facility.<sup>27</sup> The Department’s assessment is based upon the updated rule language.

In addition, since the time the site certificate was issued, the Council approved amended language for the mandatory conditions at OAR 345-025-0006(12)-(14), imposed in site certificate as Conditions 6.11, 6.13, and 6.14.<sup>28</sup> In the draft proposed order and proposed order,

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<sup>26</sup> OAR 345-022-0020(3) does not apply to the facility, with proposed changes, because it is not a special criteria facility under OAR 345-015-0310.

<sup>27</sup> OAR 345-021-0010(h)(E) and OAR 345-021-0010(h)(F)(i) require the applicant to discuss the facility’s disaster resilience, and OAR 345-021-0010(h)(F)(ii) requires the applicant to discuss the impacts of future climate condition on the proposed facility.

<sup>28</sup> The Council’s rulemaking to amend the language of the mandatory conditions at OAR 345-027-0020(12)-(14) was part of the more extensive rulemaking wherein the Council also approved amended language for OAR 345-021-0010(1)(h) (the Division 21 requirements for Exhibit H), OAR 345-022-0020 (the Council’s Structural Standard), and OAR 345-050-0060. OAR 345-050-0060 contains rules applicable to radioactive waste disposal facilities and is therefore not applicable to the Summit Ridge Wind Farm, which does not include such a component. Council also undertook a separate rulemaking in 2017 which resulted in the “mandatory conditions” being reorganized from OAR 345, Division 27 to Division 25.

1 based on recent changes in OAR 345-025-0006 rule language, the Department recommend~~ed~~  
2 Council amend Conditions 6.11, 6.13 and 6.14 as follows:

3  
4 **Recommended Amended Condition 6.11:** The certificate holder shall design, engineer and  
5 construct the facility to avoid dangers to human safety and the environment presented by  
6 seismic hazards affecting the site that are expected to result from all maximum probable  
7 seismic events. "Seismic hazard" includes ground shaking, ground failure, landslide,  
8 liquefaction triggering and consequences (including flow failure, settlement buoyancy, and  
9 lateral spreading), cyclic softening of clays and silts, fault rupture, directivity effects and soil-  
10 structure interaction. inundation, fault displacement and subsidence.

11 [Final Order V.A.2.6; AMD4; Mandatory Condition OAR 345-025-0006(12)]

12  
13 **Recommended Amended Condition 6.13:** The certificate holder shall notify the  
14 department, the State Building Codes Division and ~~DOGAMI~~ the Department of Geology and  
15 Mineral Industries promptly if site investigations or trenching reveal that conditions in the  
16 foundation rocks differ significantly from those described in the application for a site  
17 certificate. After the department receives the notice, the Council may require the certificate  
18 holder to consult with the Department of Geology and Mineral Industries and the Building  
19 Codes Division and to propose and implement corrective or mitigation actions.

20 [Final Order V.A.2.2; AMD4] [Mandatory Condition OAR 345-025-0006 (13)]

21  
22 **Recommended Amended Condition 6.14:** The certificate holder shall notify the  
23 department, the State Building Codes Division and the Department of Geology and Mineral  
24 Industries promptly if shear zones, artesian aquifers, deformations or clastic dikes are found  
25 at or in the vicinity of the site. After the Department receives notice, the Council may  
26 require the certificate holder to consult with the Department of Geology and Mineral  
27 Industries and the Building Codes Division to propose and implement corrective or  
28 mitigation actions.

29 [Final Order V.A.2.3; AMD4] [Mandatory Condition OAR 345-025-0006 (14)]

30  
31 The Council previously found that the facility would comply with the Structural Standard,  
32 subject to Conditions 5.8, 6.13, 6.14, 6.8, 6.10, and 6.11.

### 33 *Potential Seismic, Geological and Soil Hazards*

34  
35  
36 The certificate holder notes that potential geological and soil hazards within the analysis area  
37 (site boundary) were previously evaluated and approved by Council. The certificate holder  
38 requests neither a change to the site boundary, nor a change to facility design. As such, the  
39 Department recommends that the Council, in part, find the certificate holder's previous  
40 characterization of the potential seismic, geologic and soil hazards of the site remain adequate  
41 for Council review purposes. However, based on a request from DOGAMI, additional review of  
42 certain specific risks from "long-period ground motion" is included in this order.

To aid the Council in its review and understanding of its previous evaluation, the Department presents a summary of the seismic and non-seismic hazards as evaluated in the ASC and 2009 *Final Order on the ASC*. Previously identified seismic hazards in the facility vicinity relate to three seismic sources: the Cascadia Subduction Zone (“CSZ”) interplate events, CSZ intraslab events, and crustal events (referred to as mechanisms). The CSZ is located near the coastlines of Oregon, Washington, and British Columbia.

The facility would be located within the Columbia Plateau, which is composed of a series of layered basalt flows. ASC Figure H-1 identifies two faults; an “unnamed fault” located at the southwestern border of the site boundary, and the “Gordon Ridge Anticline” fault located to the northeast of the site boundary.<sup>29</sup>

As previously evaluated, non-seismic hazards in the facility vicinity include landslides, erosion, collapsing soils and volcanic eruptions; however, these risks were previously characterized by the Council to be “low.”<sup>30</sup> The Council also acknowledged the possibility for erosion; however, Condition 9.1 further requires the certificate holder to comply with an Erosion and Sediment Control Plan and a National Pollutant Discharge General Permit #1200-C. Active volcanoes within 100 miles from the site boundary include Mt. Jefferson, Mt. Adams, and Mt. Hood.

Condition 6.10 requires the certificate holder to design, engineer, and construct the facility to avoid dangers presented by non-seismic hazards, which include settlement, landslides, flooding, and erosion.

#### *Design, Engineer and Construct Facility to Avoid Dangers to Human Safety from Seismic and Non-Seismic Hazards*

The proposed extension to construction deadlines would not affect facility design. Conditions 6.10 and 6.11 require the certificate holder to design, engineer, and construct the facility to avoid dangers to human safety and the environment from seismic and non-seismic hazards. The requirement to address risks is informed by a pre-construction site-specific geotechnical report, which is required through Condition 5.8.

During consultation with the certificate holder in 2018 conducted as part of this amendment request, DOGAMI recommended the certificate holder conduct an investigation and mitigation of risks associated with long-period ground motions, slope stability, fault trenching, and further

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<sup>29</sup> ASC Exhibit H, Figure H-1

<sup>30</sup> Final Order on the ASC (2011-08-19), p. 134; ASC Exhibit H p. 12

1 evaluation of risks associated with faults located in proximity to the facility. The “unnamed  
2 fault” and Gordon Ridge Anticline were evaluated in the *Application for Site Certificate*.

3  
4 The certificate holder included a discussion on long-period ground motion in Exhibit H. Long  
5 period ground motions may affect structures that are distant from the source of the  
6 earthquake. Long period ground motions could arise from the “Cascadia subduction zone”  
7 event, which is generally considered to be the maximum potential earthquake source in the  
8 Pacific Northwest. The certificate holder describes that while it will conduct a more  
9 comprehensive assessment as part of its compliance with Condition 5.8, it does not expect  
10 long-period ground motion to impact the Summit Ridge facility. The certificate holder further  
11 describes that, based on its assessment, the design criteria and standards are expected to be  
12 based on extreme wind events as opposed to seismic risk. This is contrasted by the certificate  
13 holder, with its experience building and operating wind facilities in the Palm Springs, California  
14 area; an area that could be impacted by the San Andreas fault, and subsequent turbine design  
15 criteria and standards would be expected to be based on seismic risk, rather than extreme wind  
16 events. Finally, the certificate holder describes that it is not aware of any modern wind turbines  
17 in the US, Mexico, or Japan, that have been damaged from very strong earthquakes in recent  
18 years.<sup>31</sup>

19  
20 Existing Condition 5.8 requires the certificate holder to conduct, prior to construction, a site-  
21 specific geotechnical report in accordance with the DOGAMI “Open File Report 00-04  
22 Guidelines for Engineering Geologic Reports and Site-Specific Seismic Hazard Reports.” The  
23 Department recommends that this condition be amended to require the pre-construction  
24 geotechnical report to conform to the most current DOGAMI guidelines for conducting such  
25 studies, to account for the possibility that DOGAMI revises or updates its guidelines prior to the  
26 facility construction. Based on the current DOGAMI guidelines, the certificate holder would be  
27 required to identify and describe risks associated with seismic considerations, including faults  
28 that are in proximity to the proposed facility, and the probable response of the site to likely  
29 earthquakes (See DOGAMI Open File Report O-00-04 *Guidelines for Engineering Geologic*  
30 *Reports and Site-Specific Seismic Hazard Reports*, at p.1, which requires the “disclosure of  
31 known or suspected geologic hazards affecting the area...” and at p.2, which requires the  
32 description of “stratification, faults, discontinuities, foliation, schistosity, folds.”). As such,  
33 review of the identified faults would be required under Amended Condition 5.8.

34  
35 The Department also recommends amendments to Condition 5.8 to require that the certificate  
36 holder provide the pre-construction geotechnical report at least 90 days prior to beginning

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<sup>31</sup> SRWAMD4Doc17. Request for Amendment 4 2019-01-16, Section 5.1.3.

1 construction, in order to allow the Department and DOGAMI sufficient time to review the  
2 report. Finally, the Department also recommends an amendment to the condition to clarify that  
3 the pre-construction geotechnical report must specifically investigate final wind turbine  
4 locations, transmission line dead-end and turning structures, substation(s), and the operations  
5 and maintenance building.

6  
7 In the draft proposed order and proposed order, the Department recommend~~sed~~ that the  
8 Council adopt recommended amended Condition 5.8 as follows:

9  
10 **Recommended Amended Condition 5.8:** Before beginning construction, the certificate  
11 holder shall conduct a site-specific geotechnical investigation and shall report its findings to  
12 the Oregon Department of Geology & Mineral Industries (DOGAMI) and the Department.  
13 The report must be submitted to the Department and DOGAMI at least 90 days prior to  
14 beginning construction unless otherwise agreed upon by the Department. The certificate  
15 holder shall conduct the geotechnical investigation ~~after consultation with DOGAMI and~~ in  
16 general accordance with ~~DOGAMI open file report 00-04 "Guidelines for Engineering~~  
17 ~~Geologic Reports and Site Specific Seismic Hazard Reports."~~ current DOGAMI guidelines for  
18 engineering geologic reports and site-specific seismic hazard reports. The geotechnical  
19 report must, at a minimum, include geotechnical investigations at all wind turbine locations,  
20 transmission line dead-end and turning structures, substation(s), and the operations and  
21 maintenance building.

22 [Final Order V.A.2.1; AMD4]

23  
24 The Department recommends that the Council find that the certificate holder has  
25 demonstrated an ability to design, engineer, and construct the facility to avoid dangers to  
26 human safety from seismic and non-seismic based on the findings presented here, including  
27 existing and recommended amended site certificate conditions.

28  
29 *Disaster Resilience and Climate Change Adaption*

30  
31 As noted above, rulemaking conducted since the last Council decision on the Summit Ridge  
32 Wind Facility established new informational requirements within OAR Chapter 345, Division 21.  
33 Specifically, OAR 345-021-0010(h)(F)(i) and OAR 345-021-0010(h)(F)(ii) require the certificate

holder to discuss the facility’s disaster resilience, and ability to withstand impacts that may arise from future climate conditions.<sup>32</sup>

The certificate holder states in Exhibit H that it is expected that climate change would likely result in increased stress to structures from more intense storms, heatwaves, and fires.<sup>33</sup> The basis for these expected impacts arise from a study conducted by Portland State University of the upper Umatilla River Basin, which is located approximately 50 miles from the project site. As the Council has previously found, and as the certificate holder represents in Exhibit H, the facility would be designed based on expected risk to the facility based on the geotechnical report and the evaluation of other hazards at the site, such as extreme wind events; the certificate holder represents the facility would be designed to be resilient after a potential disaster, such as a seismic event or event related to future climate conditions, and that the facility would otherwise withstand additional stresses relating to increased probabilities of ice and fire damage due to climate change.<sup>34</sup>

Furthermore, risks associated with fire and inclement weather is discussed within this Proposed Order at Section III.M *Public Services* and Section III.P.1 *Public Health and Safety Standards for Wind Energy Facilities*. The Dufur Volunteer Fire and Ambulance service indicated that it is available to respond in the event of an emergency, and Conditions 8.2 and 8.5 require the implementation of fire safety plans. Recommended amended Conditions 7.4 through 7.6 require the implementation of compliance plans and operational monitoring to minimize the risk of ice throw, and to ensure that turbines are continually operated in a manner consistent with manufacturer specifications.

Based upon compliance with existing, recommended new and amended a site certificate conditions, and because the proposed amendments would not change site boundary or micrositing corridor area previously evaluated, the Department concurs and recommends Council find that the facility would not affect the certificate holder’s characterization of the site

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<sup>32</sup> SRWAMD4. Draft Proposed Order Public Comment Todd. 2019-02-22. On the record of the draft proposed order, Ms. Todd questioned how the facility was reviewed in the context of climate change. The only Oregon Administrative Rule within Council purview relating to climate change was recently adopted as OAR 345-021-0010(1)(h)(F)(i)-(ii), which specifically relate to geologic an soil stability. This OAR requires an applicant to discuss how the facility would “integrate disaster resilience to ensure recovery of operations after major disaster,” and the application must also provide an “assessment of future climate conditions for the expected life span of the proposed facility.”

<sup>33</sup> SRWAMD4Doc17 Request for Amendment 4 2019-01-16, Section 5.1.3, citing to: MPDI. *Watershed Response to Climate Change and Fire-Burns in the Upper Umatilla River Basin, USA* (2017). Available online at: [www.mdpi.com/2225-1154/5/1/7/pdf](http://www.mdpi.com/2225-1154/5/1/7/pdf)

<sup>34</sup> SRWAMD4Doc11 DOGAMI Consultation 2018-11-14; e-mail chain with Yumei Wang (DOGAMI)



1 or seismic hazards, or its ability to design, engineer, and construct the facility to avoid dangers  
2 to human safety presented by seismic, geologic or soils hazards.

3  
4 **Conclusions of Law**

5  
6 Based on the foregoing recommended findings of fact and conclusions, the Department  
7 recommends that the Council find that the facility, with the requested extension of  
8 construction deadlines, would continue to comply with the Council's Structural Standard.

9  
10 **III.D. Soil Protection: OAR 345-022-0022**

11  
12 *To issue a site certificate, the Council must find that the design, construction and*  
13 *operation of the facility, taking into account mitigation, are not likely to result in a*  
14 *significant adverse impact to soils including, but not limited to, erosion and chemical*  
15 *factors such as salt deposition from cooling towers, land application of liquid effluent,*  
16 *and chemical spills.*

17  
18 **Findings of Fact**

19  
20 The Soil Protection standard requires the Council to find that the design, construction, and  
21 operation of a proposed facility, or facility with proposed changes, is not likely to result in  
22 significant adverse impacts to soil.

23  
24 The analysis area for the Soil Protection standard, as defined in the project order, includes the  
25 area within the site boundary.

26  
27 For amendments requesting to extend construction deadlines, the Department and Council  
28 evaluate whether there have been "changes in fact or law" since the site certificate or amended  
29 site certificate was issued to determine whether, based on changes in fact or law, the facility  
30 would continue to satisfy requirements of the standard. The certificate holder evaluates  
31 potential changes in land use that could impact the evaluation of potential impacts to soils  
32 within the analysis area. Based on this evaluation, the certificate holder asserts that there have  
33 not been significant changes to land use and that almost all of the area within the site boundary  
34 is non-irrigated land used primarily for dryland winter wheat production. The remaining areas  
35 within the site boundary serve as pasture for cattle, although cattle grazing may have been  
36 temporarily suspended in certain areas due to the effects of the 2018 fires.<sup>35</sup>

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<sup>35</sup> SRWAMD4Doc17 Request for Amendment 4 2019-01-16, Section 5.1.4



1 Because there have been no known significant changes in land use, soil conditions and use  
2 within the analysis area, the Department presents a summary of Council's previous evaluation  
3 of potential soil related impacts during construction and operation of the facility, as approved,  
4 for Council's reference.

5  
6 Potential impacts to soil from facility construction and operation would include: permanent  
7 and temporary soil loss; erosion; compaction; spills; and potential proliferation of noxious  
8 weeds.<sup>36</sup> Permanent soil loss would occur from placement of gravel roads and concrete pads.  
9 Erosion could occur during removal of surface vegetation, grading, and leveling; crane use;  
10 and from the trenching and installation of underground communications. Compaction could  
11 occur during use of heavy equipment. Risk of oil or other chemical spill could occur during on-  
12 site storage of oil and cleaners.

13  
14 Council previously imposed the following construction-related conditions to minimize  
15 potential erosion and compaction impacts:

- 16  
17 • Condition 9.1 requires that the certificate holder comply with a NPDES 1200-C permit  
18 and best management erosion control practices established in an Erosion and  
19 Sediment Control Plan (ESCP)
- 20 • Condition 9.2 requires that construction-related truck traffic be restricted, to the  
21 extent practicable, to improved road surfaces to avoid soil compaction

22  
23 Council previously imposed the following conditions that would minimize potential soil  
24 impacts from an onsite spill, during construction and operation; and during operations, would  
25 minimize potential soil impacts from noxious weeds and erosion:

- 26  
27 • Condition 9.4 requires that, during construction and operation, the certificate holder  
28 comply with local, state, and federal laws pertaining to the storage of hazardous  
29 materials
- 30 • Condition 9.5 requires that, during construction and operation, the certificate holder  
31 report to the Department within 72 hours of a chemical spill and to clean the spill, or  
32 release and dispose of contaminated soils
- 33 • Conditions 9.6 and 9.7 require that, during operation, the certificate holder restore  
34 vegetation, implement decompaction measures, and monitor and control for spread  
35 of noxious weeds

---

<sup>36</sup> SRWAPPDoc56. ASC 2010-08-24, Exhibit I, Section I.4 p.3

- Condition 9.8 requires that, during operation, the certificate holder routinely inspect and maintain erosion and sediment control measures installed along the transmission corridor, roads, and pads for erosion; and, requires noxious weed monitoring and implementation of control measures

Based upon the above recommended findings and compliance with existing site certificate conditions, the Department recommends that the Council find that the design, construction and operation of the facility would continue not likely to result in significant adverse impacts to soils.

### **Conclusions of Law**

Based on the foregoing recommended findings of fact and conclusions of law, and subject to compliance with existing site certificate conditions, the Department recommends that the Council find that the facility would continue to satisfy the requirements of the Council's Soil Protection standard.

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

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

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

*(a) The applicant elects to obtain local land use approvals under ORS 469.504(1)(a) and the Council finds that the facility has received local land use approval under the acknowledged comprehensive plan and land use regulations of the affected 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).

\*\*\*

## **Findings of Fact**

The Land Use standard requires the Council to find that a proposed facility or facility, with proposed changes, would continue to comply with local applicable land use substantive criteria, as well as the statewide planning goals adopted by the Land Conservation and Development Commission (LCDC).<sup>37</sup>

The analysis area for the Council's Land Use standard is the area within and extending ½-mile from the site boundary.

## **Local Applicable Substantive Criteria**

On July 31, 2009, during the review of the ASC, the Council appointed the Wasco County Board of Commissioners as the Special Advisory Group (SAG) for the facility. On behalf of and as authorized by the SAG, the Wasco County Planning Director identified applicable substantive criteria to be considered during the ASC phase and through subsequent amendment requests in evaluating the facility. During the review process of pRFA4, the Department received a comment letter from the Wasco County Board of County Commissions (dated October 17, 2018), which indicated that there have been no changes to rules or regulations within Wasco County since 2016, which precedes the date of the most recent Council evaluation.<sup>38</sup> There have been no changes to the applicable substantive criteria since the Council's review of RFA3; however, some sections of the Wasco County Land Use and Development Ordinance (WCLUDO) have been administratively renumbered.<sup>39</sup> The relevant substantive criteria that the facility must comply with are summarized in Table 1, *Wasco County Applicable Substantive Criteria*.

<sup>37</sup> The Council must apply the Land Use standard in conformance with the requirements of ORS 469.504.

<sup>38</sup> SRWAMD4Doc8 SAG Comments Wasco County Board of Commissioners 2018-10-18

<sup>39</sup> Under the Council's Land Use standard at OAR 345-022-0030, the "applicable substantive criteria" are criteria from the affected local government's acknowledged comprehensive plan and land use ordinances that are required by the statewide planning goals and that are in effect on the date the applicant submits the application. For Council review of a request for amendment, pursuant to OAR 345-027-0075(3)(a) the Council shall apply the applicable substantive criteria under the Land Use standard in effect on the date the certificate holder submitted the request for amendment.

1

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

<b>Wasco County Land Use Development Ordinance (WCLUDO) – Previous Numbering</b>	<b>Administrative Re-numbering</b>
<b>Chapter 1 – Introductory Provisions</b>	
Section 1.030: Severability / Legal Parcel Determination	No changes
Section 1.090: Definitions of Parcel and Structure	No changes
<b>Chapter 3 – Basic Provisions</b>	
Section 3.210: Exclusive Farm Use Zone	No changes
Section 3.210(B): Uses Permitted Without Review	Section 3.212: Uses Permitted Without Review (note that “Transportation Facilities” subpart 7 is listed under Section 3.212.G, the text from this provision has not changed).
Section 3.210(D): Uses Permitted Subject to Standards / Type II Review	Section 3.214: Uses Permitted Subject to Standards / Type II Review (note that “Utility / Energy Facilities” subpart 12 is now listed under Section 3.214.I but the text from the provision has not changed).
Section 3.210(E): Conditional Uses	Section 3.215: Uses Permitted Subject to Condition Use Review / Type II or Type III (note that “Commercial Power Generating Facility” subpart 14 is now listed under Section 3.215.M but the text from the provision has not changed).
Section 3.210(F): Property Development Standards	Section 3.216: Property Development Standards
Section 3.210(H): Agricultural Protection	Section 3.218: Agricultural Protection
Section 3.210(J): Additional Standards	Section 3.219: Additional Standards (note that “Wind Power Generating Facility” was previously included within 3.210(J)(17) but is now included under 3.219.Q; the text from the provision has not changed).
<b>Chapter 4 – Supplemental Provisions</b>	
Section 4.070: General Exceptions to Building Height	Section 4.070: General Exceptions to Building Height
<b>Chapter 5 – Conditional Use Review</b>	
Section 5.020: Authorization to Grant or Deny Conditional Uses, and Standards and Criteria Used	No changes
<b>Chapter 10 – Fire Safety Standards</b>	No changes

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

<b>Wasco County Land Use Development Ordinance (WCLUDO) – Previous Numbering</b>	<b>Administrative Re-numbering</b>
<b>Chapter 19 – Standards for Energy Facilities and Commercial Energy Facilities</b>	No changes
Chapter 19, Section 19.010: Purposes	No changes
Chapter 19, Section 19.030	No changes
<b>Wasco County Comprehensive Plan (WCCP)</b>	
Goal 1 (Citizen Involvement)	
Goal 2 (Land Use Planning)	
Goal 3 (Agricultural Lands)	
Goal 5 (Open Space, Scenic and Historic Areas and Natural Resources)	
Goal 6 (Air, Water and Land Resources Quality)	
Goal 8 (Recreational Needs)	
Goal 9 (Economy of the State)	
Goal 11 (Public Facilities and Services)	
Goal 12 (Transportation)	
Goal 13 (Energy Conservation)	

For amendment requests to extend construction deadlines, the Department and Council evaluate whether there have been “changes in fact or law” since the site certificate or amended site certificate was issued to determine whether, based on changes in fact or law, the facility would continue to satisfy requirements of the standard. As described above, there are no new code provisions within WCLUDO or Wasco County’s Comprehensive Plan.

Based on comments received on the draft proposed order and zoning provisions that could be impacted by changes in fact or law since the Council’s previous authorization of the Third Amended Site Certificate, the Department presents an evaluation of the certificate holder’s ability to satisfy the requirements of WCLUDO Sections 19.030.5(C)(5), 19.030(D)(1)(c), and WCCP Goals 5 and 6.

#### **WCLUDO Section 19.030(C)(5) Natural Resource/Wildlife Protection**

*Taking into account mitigation, siting, design, construction and operation the energy facility will not cause significant adverse impact to important or significant natural resources identified in the Wasco County Comprehensive Plan, Wasco County Land Use and Development Ordinance or by any jurisdictional wildlife agency resource management plan adopted and in effect on the date the application is submitted. As appropriate, the permit holder agrees to implement monitoring and mitigation actions*

- 1        *that Wasco County determines appropriate after consultation with the Oregon*  
2        *Department of Fish and Wildlife, or other jurisdictional wildlife or natural resource*  
3        *agency. Measures to reduce significant impact may include, but are not limited to the*  
4        *following:*
- 5        *a. Providing information pertaining to the energy facility's potential impacts and*  
6        *measures to avoid impacts on:*
    - 7            *(1) Wildlife (all potential species of reasonable concern);*
    - 8            *(2) Wildlife Habitat;*
    - 9            *(3) Endangered Plants; and*
    - 10          *(4) Wetlands & Other Water Resources.*
  - 11        *b. Conducting biologically appropriate baseline surveys in the areas affected by the*  
12        *proposed energy facility to determine natural resources present and patterns of*  
13        *habitat use.*
  - 14        *c. Selecting locations to reduce the likelihood of significant adverse impacts on natural*  
15        *resources based on expert analysis of baseline data.*
  - 16        *d. Utilizing turbine towers that are smooth steel structures that lack features that*  
17        *would allow avian perching. Where horizontal surfaces cannot be avoided, anti-*  
18        *perching devices shall be installed where it is determined necessary to reduce bird*  
19        *mortality.*
  - 20        *e. Designing and installing all aboveground transmission line support structures*  
21        *following the current suggested practices for avian protection on power lines*  
22        *published by the Avian Power Line Interaction Committee.*
  - 23        *f. Utilizing towers and transmission line support structures designed so the foundation*  
24        *area and supports avoid the creation of artificial habitat or shelter for raptor prey.*
  - 25        *g. Controlling weeds to avoid the creation of artificial habitat suitable for raptor prey*  
26        *such as spreading gravel on turbine pad.*
  - 27        *h. Avoiding construction activities near raptor nesting locations during sensitive*  
28        *breeding periods and using appropriate no construction buffers around known nest*  
29        *sites.*
  - 30        *i. Locating transmission lines or associated transmission lines with the energy facility*  
31        *to minimize potential impacts (e.g., 50 feet from the edge of the nearest wetland or*  
32        *water body except where the line is required to cross the wetland or water body; or*  
33        *separating transmission lines or associated transmission lines with the energy facility*  
34        *from the nearest wetland or water body by topography or substantial vegetation to*  
35        *the extent practical, except where the line is required to cross the wetland or water*  
36        *body).*
  - 37        *j. Locating transmission towers or associated transmission towers outside of Class I or*  
38        *II streams unless:*
    - 39            *(1) Adjoining towers and conductors cannot safely and economically support the*  
40            *line(s) that span the stream without an in-stream tower; and*
    - 41            *(2) The lines cannot be safely and economically placed under the water or*  
42            *streambed.*

1                   (3) Developing a plan for post-construction monitoring of the facility site using  
2                   appropriate survey protocols to measure the impact of the project on identified  
3                   natural resources in the area.<sup>40</sup>  
4

5 WCLUDO Section 19.030(C)(5) requires a finding that the construction and operation of the  
6 facility would not cause a significant adverse impact to important or significant natural  
7 resources identified in the Wasco County Comprehensive Plan (WCCP), WCLUDO or by “any  
8 jurisdictional wildlife agency resource management plan adopted and in effect on the date the  
9 application is submitted.” Further, WCLUDO Section 19.030(C)(5) requires that monitoring and  
10 mitigation actions be determined appropriate by the County, ODFW, or other jurisdictional  
11 wildlife or natural resource agency.  
12

13 Important or significant natural resources identified in the WCCP, WCLUDO, or other  
14 jurisdictional wildlife agency resource management plan were previously evaluated on the  
15 record of prior EFSC proceedings for the facility. The WCCP identifies five natural areas in Table  
16 11B of the Natural Resource Section of Chapter 2, Physical Characteristics. WCLUDO does not  
17 identify any natural areas specifically, but instead refers to those identified in the WCCP. The  
18 only natural area located near the facility site boundary is Sharps Island, which is listed as a  
19 natural area in the WCCP because of the Great Blue Heron Rookery and the riparian habitat of  
20 the area. As the facility is well outside the Deschutes River Canyon where Sharps Island is  
21 located, the Council previously found that there would not be any significant adverse impacts  
22 to the natural areas identified by the WCLUDO and WCCP.  
23

24 The Council has historically interpreted the reference to “other jurisdictional wildlife agency” in  
25 WCLUDO Section 19.030(C)(5) to apply to the Oregon Department of Fish and Wildlife (ODFW),  
26 as the state wildlife agency. The Department recommends Council not consider that the  
27 reference to “other jurisdictional wildlife agency” be intended to apply or incorporate  
28 requirements and resources protected by federal jurisdictional wildlife agencies.<sup>41</sup> Important

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<sup>40</sup> This criterion is also listed as (3) in the online version of WCLUDO. The Department presumes this is a typographical error and that it is meant to be a separate criterion from (j).

<sup>41</sup> SRWAMD4. Draft Proposed Order Comment Smallwood. 2019-02-22. On the record of the draft proposed order, Smallwood interprets WCLUDO’s Section 19.030(C)(5) reference to “any jurisdictional wildlife agency” to apply to the United States Fish and Wildlife Service’s (USFWS) Eagle Take Rule and USA Eagle Conservation Plan Guidance. However, as described in the proposed order, the Department disagrees that WCLUDO’s Section 19.030(C)(5) reference to “any jurisdictional wildlife agency” was intended to apply to federal agencies and federal plans and considers it highly unlikely that Wasco County intended to assume such vast authority, and questions whether the County (or the Council, in this case) even could legally assume such authority. Furthermore, as is explained in Section III.I, *Threatened and Endangered Species*, the certificate holder must comply with all applicable federal regulations, independent of the site certificate review process.



resources include State-sensitive and State-listed Threatened and Endangered species, addressed under the Council’s Fish and Wildlife Habitat standard and the Threatened and Endangered Species standard. In ASC Exhibits J, P, and Q; the certificate holder’s four subsequent amendment requests; and in its survey reports, the certificate holder provided information pertaining to the facility’s potential impacts and the certificate holder’s measures to avoid impacts on wildlife, wildlife habitat, endangered plants, and wetlands and other water resources. In all previous final orders for the facility, the Council found that the facility would comply with the Council’s Fish and Wildlife Habitat standard and Threatened and Endangered Species standard. As discussed in Section III.H, *Fish and Wildlife Habitat* and Section III.I, *Threatened and Endangered Species* of this order, the Department recommends Council find that the facility would continue to comply with the Council’s Fish and Wildlife Habitat standard and Threatened and Endangered Species standard.

Similar to Section 19.030(C)(5)(b) and (c), Council previously imposed Conditions 10.13 and 10.14 requiring that the certificate holder conduct pre-construction baseline biological surveys and, based on the results of those surveys, implement appropriate measures.<sup>42</sup> Condition 10.8 contains measures that are similar to Section 19.030(C)(5)(d) and (e), that would reduce the risk of injuries to avian species. Condition 7.2 is similar to Section 19.030(C)(5)(f) and requires a tower design that avoids creation of artificial habitat for raptor prey. Condition 9.8 requires the certificate holder to control the introduction and spread of noxious weeds, which would help achieve the objective of subsection Section 19.030(C)(5)(g). Conditions 6.32, 6.36, and 10.15 of this order would help achieve the objectives of subsections Section 19.030(C)(5)(h) through (j) by reducing impacts to raptor nests and avoiding impacts to wetlands and waterways.

Therefore, based on the analysis above and findings set forth in Section III.H, *Fish and Wildlife Habitat* and Section III.I, *Threatened and Endangered Species* of this order, and subject to compliance with the specified existing and recommended amended conditions, the Department recommends Council find that the facility would continue to satisfy WCLUDO Section 19.030(C)(5).

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<sup>42</sup> SRWAMD4. Draft Proposed Order Comment Smallwood. 2019-02-22. On the record of the draft proposed order, Smallwood suggests that to comply with WCLUDO Section 19.030(C)(5), “use and behavior” studies should be conducted to inform potential fatality risk from wind turbine collision. The Department does not agree that WCLUDO Section 19.030(C)(5) supports such requirement and clarifies that the reference to “biologically appropriate baseline surveys” applies to a mitigation option for potentially significant impacts.

**WCLUDO Section 19.030(D)(1)(c) Setbacks**

WCLUDO Section 19.030(D)(1)(c)(3)(c) Adjustment Provision – Applicant may, as part of the wind energy permitting process, obtain an administrative adjustment to authorize a lesser setback from regulations addressing turbine setbacks from city limits, urban growth boundaries or urban reserves. This may be authorized as part of the CUP pursuant to the Administrative Action process of Section 2.060(A) by the Director of designee and upon findings that demonstrate the following criteria are met:

- i. The underlying landowner (or applicable road authority or utility as may be appropriate for non-project boundary setbacks) has consented, in writing, to an adjusted setback.
- ii. The proposed adjustment complies with DEQ noise standard.
- iii. The proposed adjustment will not force a significant change in accepted farm or forest practices on surrounding lands devoted to or available for farm or forest use.
- iv. The proposed adjustment will not unduly burden existing infrastructure (e.g., underground utilities or leach fields).
- v. The proposed adjustment will not unduly impair safety in the area.
- vi. The proposed adjustment will minimize impacts to environmental resources (e.g., wetlands or identified EPDs)

WCLUDO Section 19.030(D)(1)(c)(1) and (2) establish setback requirements from wind turbines to adjacent property lines, rights-of-way of any dedicated roads, and above ground major utility facility lines. Specifically, turbines must be set back from the previously listed areas at a minimum of 1.5 times the height of the wind turbine to accommodate for potential falls. However, WCLUDO Section 19.030(D)(1)(c)(3)(c) provides a process to authorize a lesser setback. The Council, and the Wasco County Planning Department, previously authorized an administrative adjustment for the setback restriction for 17 wind turbines, which reduced setbacks from the default 1.5 to 1.1 times the wind turbine maximum blade tip height. WCLUDO Section 10.030(D)(1)(c)(3)(c) include criteria that reference circumstances on the ground, which could have changed since the Council's previous analysis. Specifically, the Department evaluates whether there have been changes in fact – such as new residences, new infrastructure, changes in farm practices on surrounding lands – that could impact the certificate holder's ability to satisfy the adjustment provision criteria.

Relating to subsection (i), the Council previously found that consent was required from Wasco County, which maintains county roads within the applicable setback zone. As part of the review

1 on the Request for Amendment 2, Wasco County provided consent to a reduced setback.<sup>43</sup> The  
2 County is still the relevant entity by which consent is required, and the consent issued during  
3 the review of the Request for Amendment 2 is still valid<sup>44</sup> to satisfy this subsection.  
4

5 Relating to subsection (ii), the Council previously found that Condition 12.1 through 12.4  
6 ensured that the proposed adjustment complies with the DEQ noise standard. These conditions  
7 require the certificate holder to demonstrate the final design of the facility and demonstrate  
8 that the design complies with DEQ noise restrictions set forth in OAR Chapter 340 Division 35.  
9 The certificate holder indicated that there are four new noise sensitive receptors within the  
10 analysis area. The new noise sensitive receptors must be included within the analyses required  
11 by Condition 12.1 through 12.4; as such, the certificate holder must demonstrate that the  
12 facility would comply with DEQ standards as pertaining to these new receptors or the  
13 certificate holder would be required to implement a mitigation plan as required by the  
14 amended Condition 12.4 (See DPO Section III.Q.1 Noise Control Regulations).  
15

16 Relating to subsection (iii), the Council previously found that Conditions 6.12, 6.24, and 6.25  
17 ensured that the variance would not result in a significant change to accepted farming  
18 practices; there is no land zoned for forest use within the analysis area. These conditions  
19 require that the certificate holder consult with affected landowners and implement measures  
20 to avoid impacts, to design and construct the facility to minimize disturbance to farming  
21 activities, and to restore agricultural lands after disturbed. The certificate holder confirmed that  
22 the land use within the area is “generally the same” as previously described.<sup>45</sup> Because the  
23 agricultural use on surrounding lands has not changed, the Department recommends that the  
24 Council continue to find that the variance would not result in significant change to accepted  
25 farming practices.  
26

27 Relating to subsection (iv), the Council previously found that the setback variance would not  
28 unduly burden existing infrastructure. The Council based this determination on a letter  
29 submitted by the Wasco County Public Works Department, which asserted that the variance  
30 would not unduly burden any county infrastructure.<sup>46</sup>  
31

32 Relating to subsection (v), the Council previously found that the variance would not unduly  
33 impair safety. The Council determined that even if a turbine were to collapse, a setback of 110%

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<sup>43</sup> *Final Order on Amendment 2* (2016-11-04), p. 97

<sup>44</sup> SRWAMD4Doc 8-1 Response from Angie Brewer at Wasco County Re Section 19.030(D)

<sup>45</sup> SRWAMD4Doc17 Request for Amendment 4 2019-01-16, Section 5.1.4. The certificate holder notes that wildfires within the analysis area may have resulted in the temporary suspension of cattle grazing in certain areas.

<sup>46</sup> SRWAMD4Doc 8-1 Response from Angie Brewer at Wasco County Re Section 19.030(D)

1 of the turbine height would ensure that in the very rare circumstance of turbine failure, the  
2 turbine or blades would be unlikely to reach any county road. Because there are no new county  
3 roads in the area, the turbine setback of 110% of the turbine height remains sufficient to  
4 ensure that the setback variance would not unduly impact safety in the area. As discussed  
5 within Section III.P.1 *Public Health and Safety Standards for Wind Energy Facilities*, amended  
6 Conditions 7.4 and 7.5 require the certificate holder to describe in its compliance plan  
7 processes that ensure manufacturer's handling instructions are properly followed, and the  
8 approval of an operational and safety monitoring plan that includes routine inspections.  
9 Furthermore, Condition 7.6 requires the certificate holder to install self-monitoring devices on  
10 each turbine that would alert operators of dangerous conditions and that would also  
11 automatically shut down turbines in the event of abnormal vibrations.

12  
13 Relating to subsection (vi), the Council previously found that the variance would not result in  
14 impacts to environmental protection overlay districts (EPDs). The Council noted in the *Final*  
15 *Order on Amendment 2* that although the site boundary intersects on Flood Hazard Overlay, the  
16 turbines that were granted the variance would avoid the 100 year floodplain. The Council also  
17 imposed Condition 6.33, which requires the certificate holder to ensure that facility  
18 components are not developed within EPD 4 (Cultural, Historic and Archaeological), which is an  
19 overlay that protects the Center Ridge Schoolhouse. Condition 6.32 and 6.34 prohibit the  
20 certificate holder from constructing facility components in a manner that would impact  
21 waterways.

22  
23 For the above stated reasons, there are no changes in facts or law that would affect the  
24 previously approved setback variances.

25  
26 Wasco County Comprehensive Plan (WCCP)

27  
28 **WCCP Goal 5 – Open Space, Scenic, and Historic Areas and Natural Resources**

29  
30 *To conserve open space and protect natural and scenic resources.*

31  
32 ***WCCP Goal 5, Policy 5: The Deschutes and John Day River Scenic Waterways shall be***  
33 ***maintained and protected as natural and open space areas with consideration for***  
34 ***agriculture and recreation.***

35  
36 WCCP Goal 5 Policy 5 provides a broad directive for the Deschutes and John Day River Scenic  
37 Waterways to be maintained and protected as natural and open spaces. The facility would not  
38 be located within the boundary of scenic waterways; therefore, Council previously found that  
39 the facility and facility location would be consistent with WCCP Goal 5, Policy 5. Even if Goal 5,

Policy 5 were broadly interpreted to relate to visual impacts of surrounding development on the waterways, the policy does not require a specific level of protection of scenic views.<sup>47</sup>

The potential impacts of the facility on the Deschutes Scenic Waterways have been previously addressed and are again addressed in the analysis and findings set forth in this order in Sections III.F, *Protected Areas*, III.J, *Scenic Resources*, and III.L, *Recreation*. In its previous review of the referenced standards, Council found that the facility would not result in a significant adverse impact on the Deschutes Scenic Waterway. Based on these findings and analysis, the Department recommends Council continue to find that the facility would be consistent with WCCP Chapter 15 Goal 5, Policy 5.

#### **WCCP Goal 6 – Air, Water and Land Resources Quality**

*To maintain and improve the quality of the air, water and land resources of the County.*

***WCCP Goal 6, Policy 1: Encourage land uses and land management practices which preserve both the quantity and quality of air, water and land resources.***

WCCP Goal 6, Policy 1 encourages land uses and management practices that preserve air, water, and land resources. First, the policy appears to be a directive to the county to encourage the identified land use and management practices through the land use code. More importantly, the policy does not address land uses and activities in or near specific areas (e.g., wild or scenic rivers) and does not mention the Lower Deschutes River Canyon. Therefore, Council previously found that, subject to compliance with the Revegetation and Weed Control Plan, the facility would be consistent with this goal. The Department recommends Council continue to find that the facility would be consistent with WCCP Goal 6, Policy 1.

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<sup>47</sup> SRWAMD4. Draft Proposed Order Comment Gilbert 2019-02-22. On the record of the draft proposed order, Ms. Gilbert asserts that the facility would have a significant adverse visual impact on the Wild and Scenic Deschutes River and therefore would not meet the requirements of WCCP Goal 5 and 6. The Department agrees with Ms. Gilbert that the WCCP's Goal 5 and 6 apply to the facility; however, they do not establish or support Ms. Gilbert's claim that because of wind turbine visibility at specific locations along the Deschutes Wild and Scenic River, the facility would not be consistent with these goals. In the proposed order, the Department provides an explanation of the goals and policies and continues to recommend Council find that the facility would be consistent with the referenced WCCP goals and policies.

## Directly Applicable State Statutes

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

The Council previously approved as a related and supporting facility to the energy facility a 230 kV transmission line. The Council previously assessed the 230 kV transmission line under WCLUDO Section 3.210(J)(8), which directly implements ORS 215.275.<sup>48</sup> ORS 215.275 establishes the statutory criteria for determining whether a utility facility located on Exclusive Farm Use (EFU) land is “necessary for public service.” However, based upon 2013 legislation, if a utility facility necessary for public service is an “associated transmission line” as defined in ORS 215.274 and ORS 469.300, the use may be established in EFU-zoned land pursuant to ORS 215.283(c). The land use assessment for transmission lines that meet the definition of an “associated transmission line” must consider the requirements of ORS 215.274, and not ORS 215.275.

ORS 469.300(3) defines “associated transmission lines” as “new transmission lines constructed to connect an energy facility to the first point of junction of such transmission line or lines with either a power distribution system or an interconnected primary transmission system or both or to the Northwest Power Grid,” and that definition is incorporated by reference in ORS 215.274. Associated transmission lines reviewed under ORS 215.274 are a subset of the transmission lines that could be evaluated as utility facilities necessary for public service under ORS 215.283(1)(c). Wasco County has not adopted local code provisions to implement ORS 215.274. Therefore, the requirements of the statute apply directly to the facility and are evaluated below. The 230 kV transmission line proposed as a related and supporting facility to the Summit Ridge Wind Project meets the definition of “associated transmission line” and therefore must be evaluated against the ORS 215.274 criteria.

*ORS 215.274(2): An associated transmission line is necessary for public service if an applicant for approval under ORS 215.213 (Uses permitted in exclusive farm use zones in counties that adopted marginal lands system prior to 1993) (1)(c)(B) or 215.283 (Uses permitted in exclusive farm use zones in nonmarginal lands counties) (1)(c)(B) demonstrates to the governing body of a county or its designee that the associated transmission line meets:*

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<sup>48</sup> *Final Order on the ASC* (2011-08-19), pp. 33-34; *Final Order on Amendment 1* (2015-08-07), p. 32; and *Final Order on Amendment 2* (2016-11-04), pp. 55-56.

- 1  
2           (a) *At least one of the requirements listed in subsection (3) of this section; or*  
3           (b) *The requirements described in subsection (4) of this section.*  
4

5       ORS 215.274 requires that the certificate holder demonstrate that the associated transmission  
6       line meets the requirements of either ORS 215.274 (3) or (4). As discussed below, in the RFA the  
7       certificate holder provides evidence that the associated transmission line meets the  
8       requirements of paragraph (4); the certificate holder acknowledges that it does not meet the  
9       requirements of paragraph (3).

10  
11       ORS 215.274(3): *The governing body of a county or its designee shall approve an application*  
12       *under this section if an applicant demonstrates that the entire route of the associated*  
13       *transmission line meets at least one of the following requirements:*  
14

- 15           (a) *The associated transmission line is not located on high-value farmland, as*  
16           *defined in ORS 195.300 (Definitions for ORS 195.300 to 195.336), or on arable*  
17           *land;*  
18           (b) *The associated transmission line is co-located with an existing transmission line;*  
19           (c) *The associated transmission line parallels an existing transmission line corridor*  
20           *with the minimum separation necessary for safety; or*  
21           (d) *The associated transmission line is located within an existing right of way for a*  
22           *linear facility, such as a transmission line, road or railroad, that is located above*  
23           *the surface of the ground.*  
24

25       As noted above, the certificate holder acknowledges that the 230 kV transmission line would  
26       not meet any of the requirements of ORS 215.274(3).

27  
28       ORS 215.274(4)(a): *Except as provided in subsection (3) of this section, the governing body of*  
29       *a county or its designee shall approve an application under this section if, after an*  
30       *evaluation of reasonable alternatives, the applicant demonstrates that the entire route of*  
31       *the associated transmission line meets, subject to paragraphs (b) and (c) of this subsection,*  
32       *two or more of the following factors:*  
33

34       ORS 215.274(4)(a) requires an evaluation of reasonable alternatives to determine whether the  
35       associated transmission line may be sited on land other than EFU-zoned land. The evaluation of  
36       “reasonable alternatives” does not require an evaluation of all alternative EFU zoned routes on  
37       which the transmission line could be located. Rather, the certificate holder must consider  
38       reasonable alternatives and show that the transmission line must be sited on EFU-zoned land in  
39       order to provide the service. RFA4 does not directly address this statute subsection. However,  
40       the certificate holder explains, in its discussion of ORS 215.274(4)(a)(A), that because the wind  
41       facility and components would be located on EFU-zoned land, the associated transmission line  
42       must cross EFU land at the wind energy generation site in order to interconnect with the



Northwest Power Grid. In RFA4 Figure 5, based on a land use zoning map, there is no non-EFU zoned land between the transmission line and the interconnection point.

The Department therefore recommends that the Council find that the certificate holder has evaluated reasonable alternatives and has demonstrated that no reasonable alternatives that would avoid EFU land exist. However, note that ORS 215.274(4) requires both a demonstration that no reasonable alternatives that would avoid EFU land exist, and that two or more of the listed factors [ORS 215.274(a)(A) through (E)] be met, which is evaluated below.

ORS 215.274(4)(a)(A): Technical and engineering feasibility;

ORS 215.274(4)(a)(A) requires that the certificate holder demonstrate that the transmission line must be sited in an EFU zone due to technical and engineering feasibility constraints. The certificate holder describes that the transmission line would meet the “technical and engineering feasibility” criteria because no feasible transmission line route exists whereby arable and high value farmland could be avoided; and, as provided in RFA4 Figure 2, *High-Value Farmland Soils and Arable Soils*, areas within the facility site boundary and surrounding area identified as non-arable and non-high value farmland are predominately comprised of canyons, valleys, and hollows (e.g. Jameson Canyon, Stubb Hollow, and Shotgun Hollow).<sup>49</sup> As such, the Department agrees that the information provided indicates that there is a sufficient “technical” or “engineering” infeasibility of siting the transmission line on non-arable or non-high value farmland owing specifically to the canyons, valleys, and hollows present in the surrounding areas. Therefore, the Department recommends Council find that the 230 kV transmission line satisfies ORS 215.274(4)(a)(A).<sup>50</sup>

ORS 215.274(4)(a)(B): The associated transmission line is locationally dependent because the associated transmission line must cross high-value farmland, as defined in ORS 195.300 (Definitions for ORS 195.300 to 195.336), or arable land to achieve a reasonably direct route or to meet unique geographical needs that cannot be satisfied on other lands;

<sup>49</sup> SRWAMD4Doc17 Request for Amendment 4 2019-01-16, Section 5.1.5

<sup>50</sup> SRWAMD4. Draft Proposed Order Public Comment Fossum (Certificate Holder). 2019-02-22. On the record of the draft proposed order, on behalf of the certificate holder, Ms. Fossum expresses concern with the Department’s evaluation of ORS 215.274(4)(a)(A) and requests that the Department re-evaluate the certificate holder’s ORS 215.274(4)(a)(A) information provided in RFA4. Based on further review of RFA4, the Department agrees that information contained in the amendment request was overlooked and, in the proposed order, modified the recommendations to Council – that the transmission line would satisfy the ORS 215.274(4)(a)(A) criteria.

ORS 215.274(4)(a)(B) requires that the certificate holder demonstrate that the transmission line must cross high value farmland or arable land to achieve a reasonably direct route and therefore is locationally dependent. As presented in RFA4 Figure 2, almost the entire area between the site boundary and point of interconnection is arable land. Small portions of land between the site boundary and point of interconnection are high value farmland. Because there is no reasonable way to build a transmission line between the site boundary and the point of 230 kV interconnection, the Department recommends Council find that the associated transmission line must cross arable land to achieve a reasonably direct route, and that the associated transmission line is therefore “locationally dependent” and satisfies ORS 215.274(4)(a)(B).

*ORS 215.274(4)(a)(C): Lack of an available existing right of way for a linear facility, such as a transmission line, road or railroad, that is located above the surface of the ground;*

ORS 215.274(4)(a)(C) requires that the certificate holder demonstrate a lack of available existing linear facility rights-of-way for which the transmission line could be located. RFA4 Figure 6 delineates existing railroad, road, and transmission right-of-way within two to four miles of the site boundary. A BPA 500 kV line is located in proximity to the site boundary, and intersects the site boundary in some areas. However, the certificate holder explains that, due to limited interconnection availability, as well as the expected timeline for interconnection to the 500 kV line (compared to the timeline for beginning facility operations), it is not feasible to connect to the 500 BPA kV transmission line as opposed to the 230 kV BPA transmission line that is currently proposed for interconnection.

An existing railroad right-of-way is located east of the site boundary and within the Deschutes River Canyon; the right-of-way travels north-south rather than east-west, which would be the appropriate direction necessary to connect to a BPA line. Several roads exist between the point of interconnect (BPA 230 kV transmission line) and the portion of the site boundary where the wind energy generation components would be located; these roads are Adkisson and Jameson roads. The certificate holder explains that locating the associated transmission line within any one of these road rights-of-ways is not feasible for the following reasons:<sup>51</sup>

- (1) The width of the existing right of way along Jameson and Adkisson Roads does not provide sufficient space to accommodate the curvatures in the transmission route;
- (2) The length of the transmission line would increase by approximately 1.3 miles, and the cost would increase by approximately \$1.7 million;

<sup>51</sup> SRWAMD4Doc14 Response from Certificate Holder relating to 215.274 ROW

- (3) The transmission line would be required to cross existing distribution lines, and would require the “underbuild” of existing lines;
- (4) Siting the transmission line along the Adkisson and Jameson roads would require acquisition of numerous new land rights, which could result in additional costs;
- (5) The facility substation would be required to be relocated, which could impact farming operations, and the collector lines would require new design;
- (6) A new route could require new studies require by Bonneville Power Administration.

As explained in (1), the certificate holder explains that there is insufficient space in the existing road rights of way that could accommodate the transmission line. The Department acknowledges that the above evidence also demonstrates a significantly higher cost, with an expected increase in costs of excess of \$ 1.7 million. While costs may not be the only consideration in determining whether the evidence meets an evaluative factor contained within ORS 215.274, it may be a consideration in any of the factors provided within the statute (See 215.274(4)(c) below). Furthermore, staff’s evaluation of evidence contained within the record concludes that siting the transmission line along the Adkisson and Jameson roads would not result in a measurable reduction in impacts to farmland. As noted by the certificate holder in Section 5.1.5 of its RFA, the transmission line pole structures are only expected to impact approximately 0.1 acre of land and are not expected to have an impact on farming operations.<sup>52</sup> Since the certificate holder represents that the road provides insufficient space, and that siting the associated transmission line would result in an additional mile of transmission, cost an estimated \$1.7 million more, and would require the crossing of existing distribution lines, the expected benefits, if any, from requiring the certificate holder to site the transmission line along the Adkisson and Jameson roads do not outweigh the increased burdens. Based on the reasoning provided above, the Department recommends that the Council find that the 230 kV transmission line would satisfy 215.274(4)(a)(C).

ORS 215.274(4)(a)(D): Public health and safety; or

ORS 215.274(4)(a)(D) requires that the certificate holder demonstrate that the transmission line must be sited on EFU-zoned land to minimize potential impacts to public health and safety. The certificate holder does not rely on ORS 215.274(4)(a)(D) to demonstrate compliance with ORS 215.274(4)(a).<sup>53</sup>

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<sup>52</sup> The certificate holder also attests that landowners would be compensated for this loss through contract.

<sup>53</sup> SRWAMD4Doc17 Request for Amendment 4 2019-01-16, Section 5.1.5

1           ORS 215.274(4)(a)(E): Other requirements of state or federal agencies.

2  
3       ORS 215.274(4)(a)(E) requires that the certificate holder demonstrate that the transmission line  
4       must be sited in an EFU zone due to other state or federal requirements, which the certificate  
5       holder did not address. The certificate holder does not rely on ORS 215.274(4)(a)(E) to  
6       demonstrate compliance with ORS 215.274(4)(a).

7  
8           ORS 215.274(4)(b): The applicant shall present findings to the governing body of the county  
9           or its designee on how the applicant will mitigate and minimize the impacts, if any, of the  
10          associated transmission line on surrounding lands devoted to farm use in order to prevent a  
11          significant change in accepted farm practices or a significant increase in the cost of farm  
12          practices on the surrounding farmland.

13  
14       ORS 215.274(4)(b) requires that the certificate holder demonstrate that the transmission line  
15       would not result in a significant change in accepted farm practices or a significant increase in  
16       cost of farm practices on surrounding land. The certificate holder represents that transmission  
17       poles would impact approximately 0.1 acres of land and further argues that the length of the  
18       transmission line is the “shortest practicable route” between the facility substation and BPA’s  
19       substation.<sup>54</sup>

20  
21       To ensure that potential impacts to farm practices and the cost of farm practices on  
22       surrounding lands is minimized during construction, Council previously imposed Condition 6.12  
23       and 6.25. Condition 6.12 requires that the certificate holder design and construct the facility  
24       using the minimum land use necessary; Condition 6.25 requires that, during construction and  
25       operation, the certificate holder consult with area landowners and lessees to identify and  
26       implement measures to reduce or avoid adverse impacts to farm practices and farming cost.  
27       Based on compliance with previously imposed conditions and the minimal amount of  
28       permanent impacts to EFU-zoned land, the Department recommends that the Council find that  
29       the transmission line would not result in a significant change to accepted farm practices or  
30       significantly increase costs of farm practices on surrounding land. Therefore, the Department  
31       recommends Council find that the 230 kV transmission line would satisfy 215.274(4)(b).

32  
33           ORS 215.274(4)(c): The governing body of a county or its designee may consider costs  
34           associated with any of the factors listed in paragraph (a) of this subsection, but  
35           consideration of cost may not be the only consideration in determining whether the  
36           associated transmission line is necessary for public service.

---

<sup>54</sup> *Id.*

ORS 215.274(4)(c) allows for consideration of costs in determining whether the associated transmission line is necessary for public service. The certificate holder indicates in its discussion of 215.274(4)(a)(C) (“lack of an available existing right of way”) that an alternative route would increase construction costs. Although this subsection does not require the consideration of costs, the Department acknowledges that if the transmission line were required to parallel existing rights of ways, then the length of the transmission line would increase and the certificate holder would be required to obtain new land rights; these changes would increase costs associated with the transmission line.

For the above stated reasons, the Department recommends that the Council find that the certificate holder provides a sufficient alternative analysis required under ORS 215.274(4)(a), that technical and engineering feasibility constraints arise from topographical features under ORS 215.274(4)(a)(A), that the associated transmission line is locationally dependent under ORS 215.274(4)(a)(B), and that there is a lack of available existing right of way for a linear facility under ORS 215.274(4)(a)(C). As such, the Department recommends that the Council find that the associated transmission line is “necessary for public service.”

### **Conclusions of Law**

Based on the foregoing findings and the evidence in the record, and subject to compliance with existing site certificate conditions, the Department recommends the Council find that the facility, with the requested extension of the construction deadlines, would continue to comply with the 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;*

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

4  
5           (d) National and state wildlife refuges, including but not limited to Ankeny, Bandon  
6           Marsh, Baskett Slough, Bear Valley, Cape Meares, Cold Springs, Deer Flat, Hart  
7           Mountain, Julia Butler Hansen, Klamath Forest, Lewis and Clark, Lower Klamath,  
8           Malheur, McKay Creek, Oregon Islands, Sheldon, Three Arch Rocks, Umatilla, Upper  
9           Klamath, and William L. Finley;

10  
11          (e) National coordination areas, including but not limited to Government Island,  
12          Ochoco and Summer Lake;

13  
14          (f) National and state fish hatcheries, including but not limited to Eagle Creek and  
15          Warm Springs;

16  
17          (g) National recreation and scenic areas, including but not limited to Oregon Dunes  
18          National Recreation Area, Hell's Canyon National Recreation Area, and the Oregon  
19          Cascades Recreation Area, and Columbia River Gorge National Scenic Area;

20  
21          (h) State parks and waysides as listed by the Oregon Department of Parks and  
22          Recreation and the Willamette River Greenway;

23  
24          (i) State natural heritage areas listed in the Oregon Register of Natural Heritage  
25          Areas pursuant to ORS 273.581;

26  
27          (j) State estuarine sanctuaries, including but not limited to South Slough Estuarine  
28          Sanctuary, OAR Chapter 142;

29  
30          (k) Scenic waterways designated pursuant to ORS 390.826, wild or scenic rivers  
31          designated pursuant to 16 U.S.C. 1271 et seq., and those waterways and rivers listed  
32          as potentials for designation;

33  
34          (l) Experimental areas established by the Rangeland Resources Program, College of  
35          Agriculture, Oregon State University: the Prineville site, the Burns (Squaw Butte) site,  
36          the Starkey site and the Union site;

37  
38          (m) Agricultural experimental stations established by the College of Agriculture,  
39          Oregon State University, including but not limited to: Coastal Oregon Marine  
40          Experiment Station, Astoria Mid-Columbia Agriculture Research and Extension  
41          Center, Hood River Agriculture Research and Extension Center, Hermiston Columbia  
42          Basin Agriculture Research Center, Pendleton Columbia Basin Agriculture Research  
43          Center, Moro North Willamette Research and Extension Center, Aurora East Oregon

*Agriculture Research Center, Union Malheur Experiment Station, Ontario Eastern Oregon Agriculture Research Center, Burns Eastern Oregon Agriculture Research Center, Squaw Butte Central Oregon Experiment Station, Madras Central Oregon Experiment Station, Powell Butte Central Oregon Experiment Station, Redmond Central Station, Corvallis Coastal Oregon Marine Experiment Station, Newport Southern Oregon Experiment Station, Medford Klamath Experiment Station, Klamath Falls;*

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

\*\*\*

## **Findings of Fact**

The Protected Areas standard requires the Council to find that, taking into account mitigation, the design, construction, and operation of a proposed facility or facility, with proposed changes, 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.<sup>55</sup>

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<sup>55</sup> SRWAMD4. Draft Proposed Order Public Comment Gilbert. 2019-02-22. On the record of the draft proposed order, Ms. Gilbert expresses concerns that the weight and vibration of wind turbines, and wind turbine pads, may reduce groundwater flow to streams and rivers that feed into the Deschutes Federal Wild and Scenic River, which would then negatively impact fish habitat. Ms. Gilbert recommends that the certificate holder be required to conduct long-term groundwater monitoring, and to evaluate potential groundwater impacts from facility.



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.

In RFA4, the certificate holder confirms that no new protected areas from those considered in previous Council findings were identified within the 20-mile analysis area. The certificate holder previously identified 24 protected areas within the analysis area; these protected areas are presented in Table 2, *Protected Areas within Facility Analysis Area and Distance from Site Boundary* below. The closest protected area is the Deschutes Federal Wild and Scenic River, located approximately 0.6 miles from the site boundary.

**Table 2: Protected Areas within Facility Analysis Area and Distance from Site Boundary**

<b>Protected Area (OAR Reference)</b>	<b>Distance from Site Boundary (in miles)</b>
Deschutes Federal Wild and Scenic River (345-022-0040(1)(k))	0.6
Deschutes State Scenic Waterway (345-022-0040(1)(k))	0.8
Lower Deschutes Wildlife Area (345-022-0040(1)(p))	2
Columbia Basin Agriculture Research Center (345-022-0040(1)(m))	6.9
Columbia River Gorge National Scenic Area (345-022-0040(1)(g))	7.2
White River Federal Wild and Scenic River (345-022-0040(1)(k))	8.5
Deschutes River State Recreation Area (345-022-0040(1)(h))	9
Heritage Landing (Deschutes)	9.1

operation based on an evaluation of impacts in areas outside of the site boundary. As presented in this section, an evaluation of impacts from a facility's water use is required under the Proposed Areas standard; the standard does not require an evaluation of a facility's potential impacts to groundwater. Furthermore, Ms. Gilbert did not provide evidence that the Summit Ridge facility may somehow impact groundwater flow that would feed into the Deschutes River due to the weight or vibration of operating wind turbines.

**Table 2: Protected Areas within Facility Analysis Area and  
Distance from Site Boundary**

<b>Protected Area (OAR Reference)</b>	<b>Distance from Site Boundary (in miles)</b>
(345-022-0040(1)(h))	
White River Falls State Park (345-022-0040(1)(h))	9.1
White River State Wildlife Area (345-022-0040(1)(p))	11
Columbia Hills (Horsethief Lake) State Park (345-022-0040(1)(h))	11.8
Maryhill State Park (345-022-0040(1)(h))	12.4
Columbia Hills Natural Area Preserve (345-022-0040(1)(i))	14.4
Doug's Beach State Park (345-022-0040(1)(h))	14.8
Botanical/Scenic Areas Within Columbia Gorge ACEC (345-022-0040(1)(o))	15.8
John Day Wildlife Refuge (345-022-0040(1)(d))	17.4
Tom McCall Preserve ACEC (345-022-0040(1)(o))	17.4
Mayer State Park (345-022-0040(1)(h))	18.1
Lower Klickitat Federal Wild and Scenic River (345-022-0040(1)(k))	18.3
John Day Federal Wild and Scenic River (345-022-0040(1)(k))	18.4
John Day State Scenic Waterway (345-022-0040(1)(k))	18.4
Badger Creek Wilderness Area (345-022-0040(1)(c))	18.7
Memaloose State Park (345-022-0040(1)(h))	19.8
JS Burres State Recreation Site/BLM (345-022-0040(1)(h))	20
Source: SRWAPPDoc56. ASC Exhibit L. 2010-08.	

- 1
- 2 For amendments requesting to extend construction deadlines, the Department and Council
- 3 evaluate whether there have been “changes in fact or law” since the site certificate or amended
- 4 site certificate was issued to determine whether, based on changes in fact or law, the facility
- 5 would continue to satisfy requirements of the standard. As described above, there are no new

protected areas within the 20-mile analysis area from those considered in previous Council orders for this facility. Therefore, based on the scope of the amendment request, a construction deadline extension, and the fact that there are no new protected areas which have not been previously evaluated, the Department recommends Council rely on its previous reasoning and analysis to make findings and conclusions of law related to potential impacts under this standard.

#### *Potential Noise Impacts*

The closest protected areas to the site boundary are the Deschutes Federal Wild and Scenic River, and the Deschutes State Scenic Waterway, which are located approximately 0.6 miles and 0.8 miles from the boundary (respectively). ASC Exhibit X Figure X-1 demonstrates that predicted noise levels from facility operation at the Deschutes River would be lower than 36 dBA. This estimation is likely conservative because, as explained by the certificate holder, noise levels are expected to be less than modelled due to geometric spreading and attenuation.<sup>56</sup> Noise emitted from the facility would be negligible such that it would not result in a significant adverse impact to the protected area. The Department recommends that Council find that facility noise would not be likely to result in significant adverse impacts to protected areas within the analysis area.

#### *Traffic Impacts*

The Council previously found in the *Final Order on the ASC* that traffic demands in the vicinity of the facility are “low” and that any effects from the Summit Ridge construction are expected to be “temporary and negligible.”<sup>57</sup> The Council relied on this previous finding in its *Final Order on the ASC*. As stated in the *Final Order on the ASC*, the transportation routes do not pass through any protected areas (with the exception of I-84 through the Columbia River Gorge National Scenic Area). The Council found that there may be temporary delays to access protected areas related to the Deschutes River; however, the Council found that such delays would not result in

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<sup>56</sup> The certificate holder estimates that noise would attenuate at a rate of 6 dBA per doubling of distance (See Exhibit X of the ASC, p. 2); the presence of structures, trees, vegetation, ground effects, or terrain is also expected to further reduce noise.

<sup>57</sup> *Final Order on the ASC* (2011-08-19), page 79

1 a significant adverse impact to those areas.<sup>58</sup> The Department recommends that Council find  
2 that construction and operational traffic would not be likely to result in significant adverse  
3 impacts to protected areas within the analysis area.

#### 4 5 *Water Use and Wastewater*

6  
7 In the *Final Order on the ASC*, the Council found that the proposed facility would not  
8 significantly impact water resources within any protected area.<sup>59</sup> The Council noted that the  
9 majority of water use would occur during the construction phase; water would be received  
10 from the City of The Dalles. Operational water use would be procured from an on-site well as  
11 described by Condition 10.9. The Council found that “facility water use would be temporary”  
12 and “relatively small in volume.”

13  
14 The O&M building would discharge wastewater into a permitted on-site septic system as  
15 described within Condition 7.8. Stormwater would infiltrate on site. The Council noted that no  
16 water used on site would be discharged into wetlands or other adjacent resources as described  
17 by Condition 10.10.

18  
19 Furthermore, since wastewater would be disposed in a septic system, and because no water  
20 would be withdrawn from any protected area, Council previously found that water use and  
21 wastewater discharge from this facility would have no impact to protected areas.

#### 22 23 *Visual Impacts of Facility Structures*

24  
25 The Council previously found in the *Final Order on Amendment 2* that turbines would be visible  
26 but that the visual impacts would be “negligible” to the following areas<sup>60</sup>:

- 27  
28 • Badger Creek Wilderness Area  
29 • Columbia Hills Natural Area Preserve  
30 • Columbia Basin Agricultural Research Center  
31 • Deschutes River State Recreation Area

---

<sup>58</sup> *Final Order on the ASC* (2011-08-19), page 79

<sup>59</sup> *Final Order on the ASC* (2011-08-19), p. 79

<sup>60</sup> *Final Order on Amendment 2* (2016-11-04), p. 115

- Heritage Landing (Deschutes) State Park
- John Day Wildlife Refuge
- White River Federal Wild and Scenic River
- White River State Wildlife Area

The Council previously found that the impacts to the above listed protected areas would be “negligible” based on the (1) distance to the turbines; (2) vegetation screening; and (3) views from some protected areas would be limited to canyon rims and turbines would not be visible from the river level.

The Council previously found in the *Final Order on Amendment 2* that turbines would be visible from the following areas and also provided an assessment of the visual impacts:<sup>61</sup>

- Columbia River Gorge National Scenic Area
- Lower Deschutes River Canyon<sup>62</sup>

The Council previously found that the facility would not result in significant adverse visual impacts to the Columbia River Gorge National Scenic Area, because wind turbines would be subordinate to the landscape, which already contains “significant” human-made development.

The Council previously found that the facility would not result in significant adverse visual impacts to the Lower Deschutes River Canyon because wind turbines would not dominate views, would be subordinate to the landscape, or would otherwise be visible from areas that area considered to be “generally inaccessible.”<sup>63</sup> In order to make these findings, Council previously evaluated the certificate holder’s visual simulations, which were developed at 5 different locations along the Deschutes River.<sup>64</sup> These viewpoints were (1) an area near the Game Commission Camp; (2) Bedsprings; (3) Snake in the box; (4) Box Elder Canyon; (5) Cedar Island.<sup>65</sup> These viewpoint locations were selected “to reflect ‘worst case’ conditions when viewed from important or significant scenic and aesthetic resources... these viewpoints include locations with relatively high use (based on ease of access and presence of developed

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<sup>61</sup> *Final Order on Amendment 2* (2016-11-04), p. 115-116

<sup>62</sup> The “Lower Deschutes River Canyon” includes the Deschutes Federal Wild and Scenic River, Deschutes State Scenic Waterway, and the Lower Deschutes Wildlife area.

<sup>63</sup> *Final Order on the ASC* (2011-08-19), p. 80; *Final Order Amendment 2* (2016-11-04), p. 116

<sup>65</sup> Note that the *Final Order on Amendment 1* indicates that the “Snake-in-the-Box” vantage point is “purposefully oriented toward a side canyon with the most direct view of the proposed turbines.”

1 recreational facilities) and position from which turbines would be most visible” (see ASC Exhibit  
2 R, p. 2).

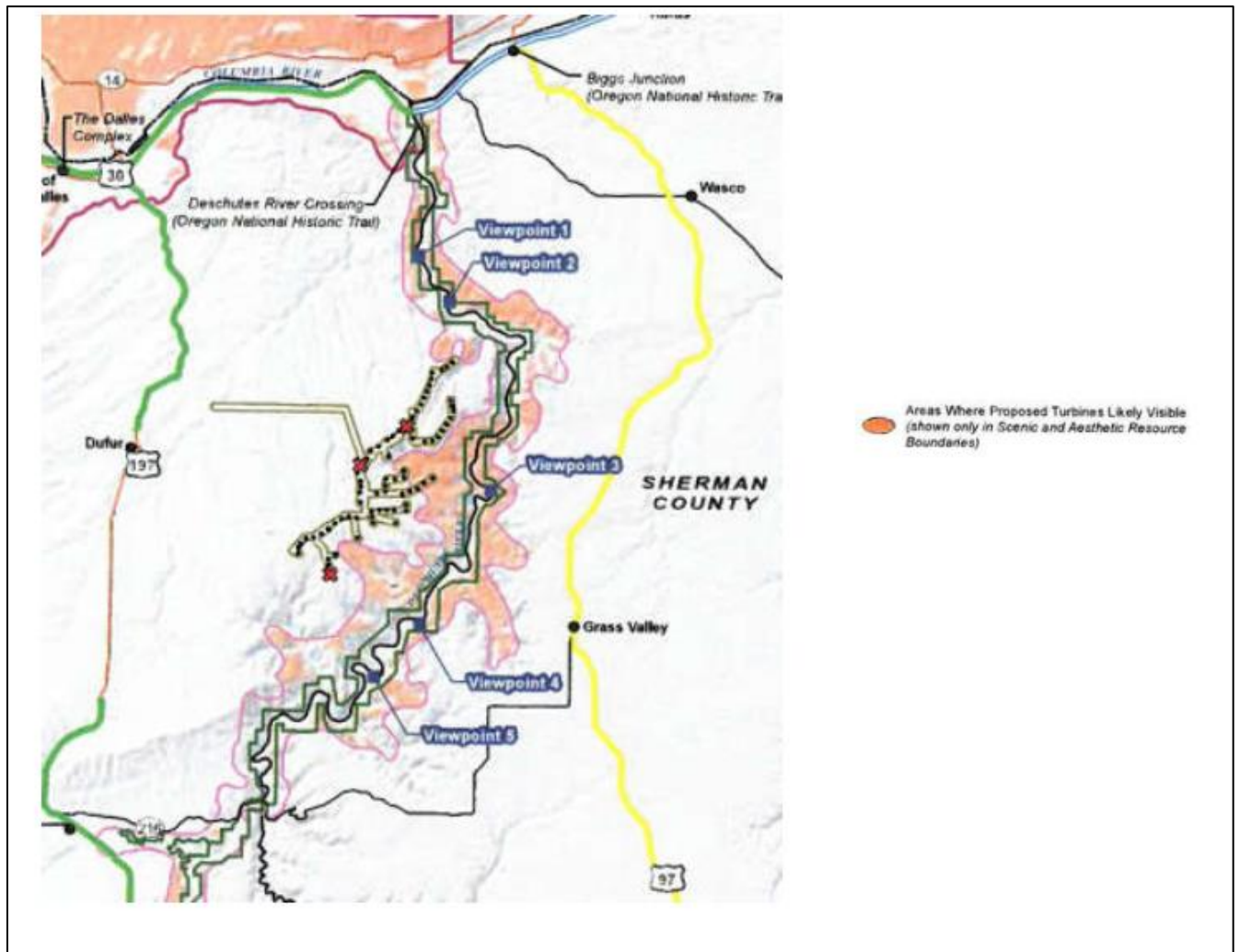
3  
4 The visibility analysis stated that “portions of multiple turbines would be visible and some  
5 highly visible along the Deschutes River generally between Macks Canyon and Game  
6 Commission Camp,” and that otherwise turbines would be “intermittently” visible from various  
7 locations along the Deschutes River.

8  
9 Visual simulations, as presented in Figures 2 through 5, indicate that the “worst case” scenario  
10 from Game Commission Camp is one turbine, which would be barely visible (viewpoint 1); from  
11 Bedsprings is three turbines, of which one turbine would be barely visible (viewpoint 2); from  
12 Snake-in-the-box is five turbines, of which one would be barely visible (viewpoint 3); and no  
13 turbines would be visible from the Box Elder Canyon or Cedar Island (viewpoints 4 and 5). As  
14 explained in the *Final Order on Amendment 1*, the viewpoints are located along “developed  
15 trails,” including an abandoned railroad grade and along roads that lie parallel to the Deschutes  
16 River. The *Final on Amendment 1* also clarified that the selected viewpoints are “generally  
17 higher on the canyon side slopes,” which indicated that the viewpoints would provide a “better  
18 vantage point from which to view turbines.”<sup>66</sup>  
19

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<sup>66</sup> *Final Order on Amendment 1*, p. 84

1 **Figure 2: Viewpoint Locations**



2



1

**Figure 3: Viewpoint 1: Game Commission Camp**



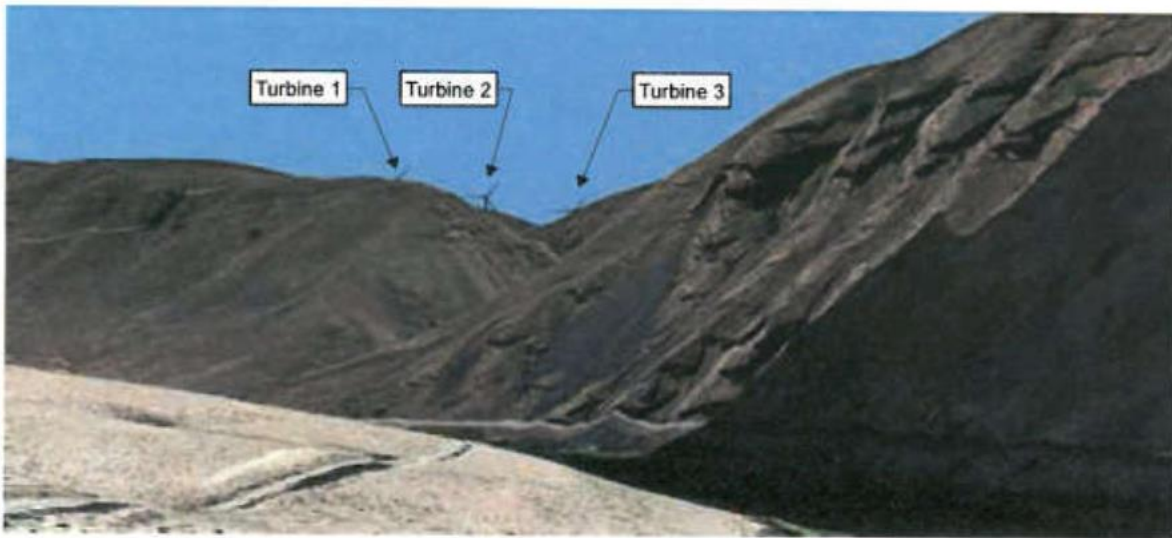
Alternative B

2

3

4

**Figure 4: Viewpoint 2: Bedsprings**



Alternative B

5

6

7

8

9

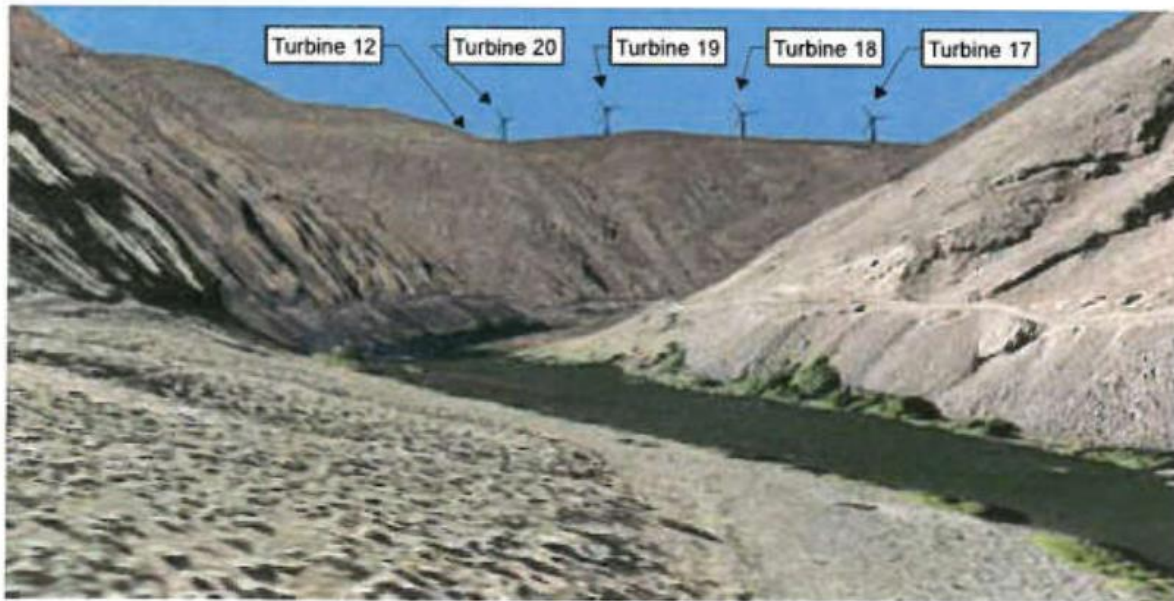
10

11

12

13

1 **Figure 5: Viewpoint 3: Snake In The Box**



Alternative C

2  
3  
4 The Council previously found that the facility would not result in significant adverse visual  
5 impacts to any of the above protected areas. The Council's reasoning was based, in pertinent  
6 part, that the protected areas were either (1) not managed or protected for scenic qualities; or  
7 that (2) that the facility would not be visible in areas readily accessible by the public.

8  
9 *Visual Impacts from Air Emissions*

10  
11 The facility would not result in air emissions or visual impacts from air emissions.

12  
13 **Conclusions of Law**

14  
15 Based on the foregoing recommended findings, the Department recommends that Council  
16 conclude that the design, construction and operation of the facility, with the requested  
17 extension of the construction deadlines, would not be likely to result in significant adverse  
18 impacts to any protected areas, in compliance with the Council's Protected Area standard.

19  
20 **III.G. Retirement and Financial Assurance: OAR 345-022-0050**

21  
22 *To issue a site certificate, the Council must find that:*

23  
24 *(1) The site, taking into account mitigation, can be restored adequately to a useful, non-*  
25 *hazardous condition following permanent cessation of construction or operation of the*  
26 *facility.*

1           (2) *The applicant has a reasonable likelihood of obtaining a bond or letter of credit in a*  
2           *form and amount satisfactory to the Council to restore the site to a useful, non-*  
3           *hazardous condition.*

4  
5   **Findings of Fact**

6  
7   The Retirement and Financial Assurance standard requires a finding that the facility site can be  
8   restored to a useful, non-hazardous condition at the end of the facility's useful life, should  
9   either the certificate holder stop construction or should the facility cease to operate. In  
10   addition, it requires a demonstration that the certificate holder has a reasonable likelihood of  
11   obtaining a bond or letter of credit to restore the site to a useful, non-hazardous condition.

12  
13   For amendments requesting to extend construction deadlines, the Department and Council  
14   evaluate whether there have been "changes in fact or law" since the site certificate or amended  
15   site certificate was issued to determine whether, based on changes in fact or law, the facility  
16   would continue to satisfy requirements of the standard. For this standard, the Department  
17   evaluates whether there have been changes in unit costs or labor rates that would affect the  
18   previous site restoration estimate and whether there have been any changes in the certificate  
19   holder's corporate structure that would impact the likelihood that the certificate holder would  
20   continue to demonstrate a likelihood of obtaining a bond or letter of credit in the amount  
21   necessary for site restoration.

22  
23   *Restoration of the Site Following Cessation of Construction or Operation*

24  
25   OAR 345-022-0050(1) requires the Council to find that the site of a proposed facility or facility,  
26   with proposed changes, can be restored to a useful non-hazardous condition at the end of the  
27   facility's useful life, or if construction of the facility were to be halted prior to completion.

28  
29   Based on review of the record for the facility, restoring the site to a useful, nonhazardous  
30   condition upon permanent cessation of construction or operations would involve removal of all  
31   turbine components, meteorological towers, aboveground electrical components, transformers  
32   and other substation equipment; removing foundations to a minimum depth of three feet  
33   below grade; removal of access roads that were not in existence prior to facility construction;

1 and grading and replanting the affected area.<sup>67</sup> A more detailed explanation of the tasks  
2 associated with decommissioning tasks is provided by the certificate holder in its  
3 *Decommissioning Scope of Work*.<sup>68</sup> In RFA4, the certificate holder asserts that proposed  
4 construction deadline extensions would not result in changes to the tasks and actions  
5 previously identified as necessary to restore the site to a useful, non-hazardous condition.  
6 Further, Council previously imposed conditions obligating the certificate holder to prevent the  
7 development of conditions (Conditions 14.3 through 14.5) on the site that would preclude  
8 restoration. These conditions specify in pertinent part:

- 10 • Condition 14.3 requires that the certificate holder prevent the development of any  
11 conditions on site that would preclude restoration of the site to a useful, non-hazardous  
12 condition.
- 13 • Condition 14.4 requires that the certificate holder retire the facility in accordance with a  
14 retirement plan approved by the Council.
- 15 • Condition 14.5 requires the certificate holder to retire the facility upon permanent  
16 cessation of construction or operation.

17  
18 Based upon compliance with existing conditions, the Department recommends Council find that  
19 the certificate holder would continue to be able to adequately restore the site to a useful, non-  
20 hazardous condition following permanent cessation of construction or operation.

#### 21 *Estimated Cost of Site Restoration*

22  
23  
24 OAR 345-022-0050(2) requires the Council to find that the certificate holder continues to have a  
25 reasonable likelihood of obtaining a bond or letter of credit in an amount satisfactory to the  
26 Council to restore the site to a useful, non-hazardous condition.

27  
28 In RFA4, the certificate holder provides an updated site restoration cost estimate based on  
29 current labor requirements, equipment needs, and duration of each task required to restore

---

<sup>67</sup> *Final Order on the ASC* (2011-08-19), p. 82

<sup>68</sup> SRWAMD4Doc16 Decommissioning Scope of Work 2018-12-04.

the site to a useful, non-hazardous condition.<sup>69</sup> The updated cost estimate was compiled by three individuals employed by the certificate holder, who maintain an aggregate of 43 years of experience in designing and constructing wind facilities. The updated cost estimate included various assumptions for: engineering & management, civil work, the deconstruction of wind turbine towers and all associated equipment, transmission line, substation, O&M building, and recycling costs. These assumptions did not include contingencies that would apply to the administration and management of site restoration in the event the certificate holder is unable to complete site restoration and the State of Oregon needs to draw the bond or letter of credit in order to decommission the facility and complete site restoration.<sup>70</sup>

The certificate holder's updated site restoration cost estimate totals \$9.9 million, in 4<sup>th</sup> quarter 2018 dollars. The Department notes that the updated retirement cost estimate assumes that it would decommission 7 miles of 230 kV transmission line; however, since the site certificate allows for the construction of up to 8 miles of transmission line, the Department adjusted the updated retirement cost based on the certificate holder's represented unit cost for transmission line decommissioning of approximately \$59,000 per mile plus contingencies, for a total of \$12 million.<sup>71</sup>

**Table 3: Updated Retirement Cost Estimate**

Restoration Activity	Quantity	Unit Cost	Unit	Estimated Cost
<i>Tasks and Actions</i>				
Engineering and Management Personnel	6	\$125,312	Per month	\$751,872
Civil Construction	101,383	\$9.40	Linear feet	\$953,000
Wind Turbine Foundations	72	\$12,531	Each	\$902,232
Wind Turbines	72	\$31,328	Each	\$2,255,622
Collector Lines	72	\$1,566	Each	\$112,752
Operations and Management Building	5,496	\$6.27	Square feet	\$34,460
Meteorological Towers, Communications Structures, Auxiliary Power	2	\$9,398	Each	\$18,796

<sup>69</sup> SRWAMD4Doc17 Request for Amendment 4 2019-01-16, Section 5.1.7. "Production rates, labor rates, and equipment rates were established using US Department of Labor wage determinations, published standards (including RS Means), and professional experience."

<sup>70</sup> SRWAMD4Doc16-1. Response from Certificate Holder re organizational expertise. 2018-12-04; 2018-12-18.

<sup>71</sup> Note that the certificate holder represents in its cost summary that it anticipates decommissioning costs of the transmission line to be approximately \$59,000 per mile.



**Table 3: Updated Retirement Cost Estimate**

Restoration Activity	Quantity	Unit Cost	Unit	Estimated Cost
Substation Decommissioning	1	\$1,253.12	Each	\$243,607
Substation Breaker Removal	3	\$40,726	Each	\$122,178
Transmission Line <sup>1</sup>	8	\$59,523	Mile	\$476,184
Transportation of Turbines	72	\$47,660	Each	\$3,431,520
Non-contracted BOP <sup>2</sup>	8	\$78,880	Month	\$631,040
Subtotal <sup>3</sup> =				\$9,933,257
<b>Applied Contingencies<sup>4</sup></b>				
1% performance Bond				\$99,332
10% Administration and Project Management Cost				\$993,325
10% Future Development Contingency				\$993,325
Total Site Restoration Cost Estimate (Q4 2018 Dollars) =				\$12,019,212
Total Site Restoration Cost Estimate (Q4 2018 Dollars – Rounded to Nearest \$1,000) =				\$12,019,000
Notes:				
1. In RFA4 Section 5.1.7, the certificate holder's retirement cost estimate accounted for decommissioning of 7 miles of transmission line. The Department adjusted the retirement cost estimate, as presented in this table, based on an 8 mile transmission line, consistent with the length of the approved transmission line.				
2. Non-contracted BOP are estimated internal costs including project management, environmental and safety personnel (vehicles, lodging, per diem, wages and health).				
3. The subtotal presented in this table differs from the RFA4 Section 5.1.7 by approximately \$50,000 due to rounding and transmission line length adjustment as described in footnote 1.				
4. The contingencies applied are consistent with Condition 14.1.				

As presented in Table 3, *Updated Retirement Cost Estimate*, the Department recommends that Council add 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. Site restoration, if necessary, could occur many years in the future and the adequacy of the retirement cost estimate is therefore uncertain. Factors that contribute to future uncertainty include the potential for different environmental standards or other legal requirements; and, changes in the cost of labor or equipment, which increase at a rate that exceeds the inflation adjustment. The 10 percent contingency for administrative and management expenses relate to the direct costs assimilated by the State through 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

1 specification bid documents and contracts for demolition work, managing a bidding process,  
2 negotiations of contracts, and other tasks.<sup>72</sup>

3  
4 Existing site certificate Condition 14.1 requires the certificate holder to submit a bond or letter  
5 of credit in an initial amount of \$6.965 million (in 3<sup>rd</sup> Quarter 2010 dollars), to be adjusted to  
6 present value on the date of issuance, or in an amount based on the final design configuration  
7 of the facility and turbines types selected. The Department recommended that the Council find  
8 that \$12.019 million (4<sup>th</sup> Quarter 2018 dollars) is a reasonable estimate of an amount  
9 satisfactory to restore the site to a useful, nonhazardous condition. As discussed below, the  
10 Department recommends the Council amend Condition 14.1 to reflect the updated site  
11 restoration cost estimate.

12  
13 *Ability of the Certificate Holder to Obtain a Bond or Letter of Credit*

14  
15 OAR 345-022-0050(2) requires the Council to find that the certificate holder continues to have a  
16 reasonable likelihood of obtaining a bond or letter of credit in a form satisfactory to the Council  
17 to restore the site to a useful, non-hazardous condition. A bond or letter of credit provides a  
18 site restoration remedy to protect the state of Oregon and its citizens if the certificate holder  
19 fails to perform its obligation to restore the site. The bond or letter of credit must remain in  
20 force until the certificate holder has fully restored the site. OAR 345-025-0006(8) establishes a  
21 mandatory condition, Condition 14.1, which ensures compliance with this requirement.

22  
23 In the draft proposed order and proposed order, the Department recommend~~sed~~ that the  
24 Council amend existing Condition 14.1 to require an initial bond or letter of credit amount that  
25 reflects the updated site restoration cost estimate. In the draft proposed order and proposed  
26 order, the Department also recommend~~sed~~ Council amend Condition 14.1 to clarify that if the  
27 certificate holder requests to adjust the bond or letter of credit based on final facility design,  
28 the decision on the sufficiency of the bond or letter of credit rests with Council, not the  
29 Department:  
30

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<sup>72</sup> SRWAMD4. Draft Proposed Order Public Comment Fossum (Certificate Holder). 2019-02-22. On the record of the draft proposed order, Ms. Fossum states that the contingencies added by the Department, totaling 21 percent, were embedded in the certificate holder's RFA4 cost estimate. However, as described in this section, the added contingencies, which apply to the State if the bond or letter of credit needed to be drawn in the event the certificate holder was unable to decommission the facility once inoperable, did not appear to be included in the certificate holder's estimate.



**Recommended Amended Condition 14.1:** Before beginning construction, the certificate holder shall submit to the State of Oregon through the Council a bond or letter of credit in the amount described herein naming the State of Oregon, acting by and through the Council, as beneficiary or payee. The initial bond or letter of credit amount is either ~~\$6.965~~ \$12.019 million (in ~~3rd Quarter 2010~~ 4<sup>th</sup> Quarter 2018 dollars), to be adjusted to the date of issuance as described in (b), or the amount determined as described in Condition 14.1.a below. The certificate holder shall adjust the amount of the bond or letter of credit on an annual basis thereafter as described in Condition 14.1.b.

- a. The certificate holder may adjust the amount of the bond or letter of credit based on the final design configuration of the facility and turbine types selected by applying the unit costs and general costs presented in Table 3 of the Final Order on Amendment 4. Any revision to the restoration costs should be adjusted to the date of issuance as described in Condition 14.1.b, and is subject to review and approval by the Department.
- b. The certificate holder shall adjust the amount of the bond or letter of credit, using the following calculation and subject to approval by the Department:
  - i. Adjust the Subtotal component of the bond or letter of credit amount (expressed in ~~3rd Quarter 2010~~ 4<sup>th</sup> Quarter 2018 dollars) 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 (the "Index") and using the ~~3rd Quarter 2010~~ 4<sup>th</sup> 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 ~~3rd Quarter 2010~~ 4<sup>th</sup> Quarter 2018 dollars to present value.
  - ii. Add 1 percent of the adjusted Subtotal (i) for the adjusted performance bond amount to determine the adjusted Gross Cost.
  - iii. Add 10 percent of the adjusted Gross Cost (ii) for the adjusted administration and project management costs and 10 percent of the adjusted Gross Cost (ii) for the adjusted future developments contingency.
  - iv. Add the adjusted Gross Cost (ii) to the sum of the percentages (iii) and round the resulting total to the nearest \$1,000 to determine the adjusted financial assurance amount.
- c. The certificate holder shall use a form of bond or letter of credit approved by the Council.
- d. The certificate holder shall use an issuer of the bond or letter of credit approved by the Council.
- e. The certificate holder shall describe the status of the bond or letter of credit in the annual report submitted to the Council required by Condition 13.1.b.
- f. The bond or letter of credit shall not be subject to revocation or reduction before retirement of the facility site.

[Final Order IV.F.2.1; AMD4] [Mandatory Condition OAR 345-025-0006(8)]

As part of RFA3, the certificate holder provided a letter from MUFG Union Bank, N.A. (dated October 20, 2017) stating that there is a reasonable likelihood that the bank would provide a Letter of Credit of up to \$10 million, subject to the bank's satisfactory review and acceptance of the terms and conditions of the relevant documents as well as internal credit review and approval.<sup>73</sup> The *Final Order on Amendment 3* noted that MUFG Union Bank is on the Council's "list of pre-approved" financial institutions. Because the updated site restoration cost estimate (\$12.271 million, in 4<sup>th</sup> Quarter 2018 dollars) is within 30% of \$10 million, and based upon the recent nature (i.e., 2017) of the financial assurance letter, the Department recommends that Council find that the 2017 financial assurance letter remains adequate and that the facility, with proposed changes, would not impact the reasonable likelihood of the certificate holder's ability to 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.

### **Conclusions of Law**

Based on the foregoing findings of fact, and subject to compliance with the existing and recommended amended conditions, the Department recommends that the Council find that the facility, with the requested extension of the construction deadlines, would comply with the Council's Retirement and Financial Assurance standard.

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

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

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

### **Findings of Fact**

The EFSC Fish and Wildlife Habitat standard requires the Council to find that the design, construction and operation of a proposed facility, or facility with proposed changes, is consistent with the Oregon Department of Fish and Wildlife's (ODFW) habitat mitigation policy,

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<sup>73</sup> SRWAMD3Doc11. Final Order on AMD3. p. 15. 2017-12-15.

goals, and standards, as set forth in OAR 635-415-0025.<sup>74</sup> The ODFW Habitat Mitigation Policy and EFSC Fish and Wildlife Habitat standard creates requirements to mitigate impacts to fish and wildlife habitat, based on the quantity and quality of the habitat as well as the nature, extent, and duration of the potential impacts to the habitat.<sup>75</sup> The policy also establishes a habitat classification system based on value the habitat would provide to a species or group of species. There are six habitat categories; Category 1 being the most valuable and Category 6 the least valuable.

The analysis area for the Fish and Wildlife Habitat standard, as established in the project order, includes the area within and extending ½-mile from the site boundary.

For amendments requesting to extend construction deadlines, the Department and Council evaluate whether there have been “changes in fact or law” since the site certificate or amended site certificate was issued to determine whether, based on changes in fact or law, the facility would continue to satisfy requirements of the standard. In RFA4, the certificate holder conducted desktop reviews to evaluate potential changes in facts related to habitat, plants and wildlife species within the analysis area. Based on the desktop review, the certificate holder affirms that there were no new State sensitive plant or wildlife species with a potential to occur within the analysis area not previously evaluated. However, based on 2018 wildfire activity, significant portions within the site boundary were damaged. Therefore, the evaluation presented below is based upon potential changes in habitat and habitat mitigation as a result of changes from recent wildlife activities; and then, in contrast, because there were no new State sensitive species identified that would warrant new or differing analysis, provides a summary of conditions previously imposed to satisfy the Council’s standard for potential impacts to State Sensitive plant and wildlife species.

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<sup>74</sup> SRWAMD4. Draft Proposed Order Public Comment Smallwood 2019-02-22. On the record of the draft proposed order, Smallwood asserts that cumulative impacts to bird and bat species must be assessed based on changes in circumstance. Referenced changes in circumstance include the increase in wind energy facilities in the United States from 2009 to 2018, from 35,128 to 96,488 MW, and USFWS’s 2013 Eagle Conservation Plan Guidance which acknowledges a significant cumulative impact to eagles from wind facilities. Based on review of applicable substantive criteria and Council standard, there is not an applicable requirement that would necessitate the cumulative impact assessment described.

<sup>75</sup> OAR 635-415-0005 defines habitat as, “the physical and biological conditions within the geographic range of occurrence of a species, extending over time, that affect the welfare of the species or any sub-population or members of the species.”

OAR 635-415-0005 defines habitat quality as, “the relative importance of a habitat with regard to its ability to influence species presence and support the life-cycle requirements of the fish and wildlife species that use it.”

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

In RFA4, the certificate holder relied upon its 2009-10 habitat assessment that informed the ASC and all previously approved site certificate amendment requests. The methods utilized in the 2009-10 habitat assessment included a desktop analysis and field-based ground verification. The certificate holder's consultant, Northwest Wildlife Consultants, prepared the habitat assessment by first delineating habitat boundaries using GIS with 1-meter resolution orthophotographs overlaid with layers for topography, hydrology, and transportation. The desktop analysis was then field verified during three site visits conducted during peak flowering and nesting season (i.e. May, June).<sup>76</sup> The certificate holder's consultant utilized habitat mapping to assess habitat quality based on presence or absence of physical, terrestrial habitat that is important for a species, which is consistent with ODFW's Habitat Mitigation Policy and historic evaluations of habitat quality for EFSC facilities.<sup>77</sup>

In 2013, ODFW conducted a mapping exercise for big game winter range habitat. ODFW policy determined that big game winter range land would be classified as Category 2 habitat, the second-highest quality habitat in the ODFW habitat classification. ODFW's 2013 big game winter range map, when compared to the facility site boundary, established that all habitat previously considered to be Category 3 and 4 would then be classified as Category 2 habitat. However, ODFW considers areas that are actively used for agricultural purposes to be Category 6 habitat, even if located within ODFW's mapped Category 2 big game winter range. Category 6 habitat is the lowest quality habitat category, and does not require mitigation under ODFW's Fish and Wildlife Habitat Mitigation Policy. Therefore, the facility site boundary includes habitat quality associated with Category 2 and Category 6 habitat; the following assessment focuses on the certificate holder's mitigation for Category 2 habitat impacts, given that Category 6 habitat does not require mitigation.

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<sup>76</sup> SRWASCDoc56. ASC Exhibit P.

<sup>77</sup> SRWAMD4. Draft Proposed Order Public Comment Smallwood. 2019-02-22. On the record of the draft proposed order, Smallwood suggests that under WCLUDO Section 19.030.5, and consistent with OAR 635-415-0005(5), habitat quality should be evaluated based on "use-and-availability" studies designed to measure performance metrics (productivity, abundances, stability, and persistence). Then, the comment recommends that, based on the use and availability studies, the Habitat Mitigation Plan (HMP) must account for habitat quality impacts including habitat loss from avian use displacement, and individualized impacts to bird and bat species. Neither the Council nor ODFW have guidance, rules or requirements that would apply to the evaluation of the habitat quality of air space. As described in this section, the Council and ODFW evaluate habitat quality based on the presence or absence of physical, terrestrial habitat that is important to the species, rather than on air space. Moreover, while Smallwood recommends that the HMP be updated to account for loss of habitat from displacement, avian mortality is addressed through implementation of a Wildlife Monitoring and Mitigation Plan (WMMP).

For the Summit Ridge Wind Farm, the habitat assessment establishes that the majority of land within the site boundary is Category 2 habitat, which is the highest habitat categorization whereby construction may occur (no construction may occur in Category 1 habitat). Temporary and permanent impacts to Category 2 habitat require the highest level of mitigation (i.e. no net loss of either habitat quantity or quality, and a net benefit of habitat quantity or quality), which the draft HMP meets by establishing the size of the mitigation area to be obtained through an easement, prior to construction and based on final facility design. The draft HMP establishes that the mitigation area must contain at least 65 acres of Category 2 habitat, which would offset permanent impacts to approximately 25 acres, and temporary impacts to approximately 35 acres of habitat disturbance. Note that temporary impacts, when there is not a temporal loss (as is predominately the case for this facility), are only required to be mitigated through revegetation and not through habitat mitigation. In the case of the Summit Ridge Wind Farm, the certificate holder proposes to mitigate temporary impacts to Category 2 habitat through revegetation and compensatory mitigation, even though compensatory mitigation is not required for temporary impacts to grassland habitats.

The Council's Fish and Wildlife Habitat standard does not dictate any specific method that must be followed to assess habitat or use of the habitat within the analysis area - only that appropriate protocols be approved by ODFW. The certificate holder's assessment of habitat quality is consistent with ODFW rules and the results of the assessment establish that the majority of the land within the site boundary is already classified as the highest quality habitat permissible for the siting of energy facilities, Category 2 habitat. To reiterate, active agriculture land is always considered to be Category 6 habitat, and ODFW policy encourages the siting of energy facilities within Category 6 habitat so as to minimize impacts to less disturbed native habitat.<sup>78</sup>

Previously identified habitat category, type and subtypes within the analysis area are presented in *Table 4: Estimated Temporary and Permanent Habitat Impacts* below.

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<sup>78</sup> SRWMAD4. Draft Proposed Order Public Comment Smallwood. 2019-02-22. On the record of the draft proposed order, Dr. Smallwood argues that the certificate holder's habitat assessment is inconsistent with Oregon Department of Fish and Wildlife's (ODFW) Oregon Administrative Rule (OAR) 635-415-0005(5) definition of "habitat," because it failed to assess habitat quality, or account for habitat loss from displacement; and, therefore would not comply with Wasco County Land Use Development Ordinance (WCLUDO) Section 19.030.C.5. Smallwood suggests that under WCLUDO Section 19.030.5, and consistent with OAR 635-415-0005(5), habitat quality should be evaluated based on "use-and-availability" studies designed to measure performance metrics (productivity, abundances, stability, and persistence). Because the Council relies upon the findings under the Fish and Wildlife Habitat standard to evaluate compliance with WCLUDO Section 19.030.5, the evaluation of Smallwood's comments is presented in the proposed order under the Council's Fish and Wildlife Habitat standard.

**Table 4: Estimated Temporary and Permanent Habitat Impacts**

Category and Subtype	Temporary	Permanent
<i>Category 2</i>		
Shrub-Steppe - Big Sagebrush Shrub Steppe	0.37	0.43
Big Game Winter Range Habitat: Developed / Disturbed Revegetated Grassland; Grassland - Native Perennial Grassland; Shrub-Steppe - Rabbit / Buckwheat Shrub-steppe; Developed / Disturbed - Old Field; Grassland – Exotic Annual Grassland	35.15	25.80
<b>Category 2 – Total</b>	<b>35.52</b>	<b>26.23</b>
<i>Category 6</i>		
<b>Category 6 – Total</b>	<b>47.16</b>	<b>41.78</b>
<b>Estimated Temporary and Permanent Habitat Impacts =</b>	<b>35.52</b>	<b>26.23</b>
Source: SRWAMD2Doc1. Request for Amendment 2, Exhibit P. 2016-02-17.		

1  
2 Council previously imposed Condition 10.7 requiring that, prior to construction, the certificate  
3 holder prepare and submit to the Department and ODFW a final habitat impact assessment, to be  
4 used to determine the compensatory mitigation obligation and habitat mitigation area required.  
5 Condition 10.7, as initially imposed, referred to plant and wildlife investigations and a habitat  
6 assessment, which the Department interprets to be synonymous – that is, the plant and wildlife  
7 investigation is the habitat assessment. In the draft proposed order, the Department  
8 recommended that the survey area extend 400-feet from potential ground disturbing activities.  
9 Based on comments received on the record of the draft proposed order, in its original proposed  
10 order issued on April 2, 2019, the Department recommend~~eds~~ Council amend Condition 10.7 to  
11 clarify the scope of the conditions, ~~as follows~~.<sup>79</sup>

<sup>79</sup> SRWAMD4. Draft Proposed Order Public Comment Smallwood 2019-02-22. On the record of the draft proposed order, Smallwood recommends Condition 10.7 be amended to clearly state the purpose and objective of the surveys. The Department agrees and, in the proposed order, incorporates additional recommended amended condition language.

SRWAMD4 Draft Proposed Order Public Comment Fossum (Certificate Holder). 2019-02-22. On the record of the draft proposed order, on behalf of the certificate holder, Ms. Fossum questioned the survey area of 400-feet beyond areas of potential disturbance, as included in the Department's proposed amendment to Condition 10.7 in the draft proposed order. Ms. Fossum explains that while the initial surveys used to inform the ASC included 400-feet beyond areas of potential disturbance, the survey area was intended to provide flexibility in final design location and that it was not biologically required or standard practice. In the proposed order, the Department removed reference to the

At the May 17, 2019 EFSC meeting, the Council considered requests for contested case on the Department's proposed order on RFA4, including requests for contested case regarding compliance with the Council's Fish and Wildlife Habitat standard. The Council denied all requests for contested case, but directed the Department to modify the proposed order with specific direction to amend site certificate conditions 10.7 and 10.5.

Specifically, changes to condition 10.7 address specific requests by Council that the condition require full field surveys of the micrositing corridor and habitat mitigation parcel, as pre-construction requirements. The direction from Council also required that ODFW approve the pre-construction survey methods protocol, and that ODFW review the pre-construction field survey results to verify that the final facility layout and design minimizes habitat impacts, based on the survey results. Further direction from Council required that the results of the pre-construction survey and verification be presented to Council by both Department and ODFW staff, and that the results be posted on the Department's website. Finally, Council directed the Department to revise the process for the reviewing and assessing the operational Wildlife Monitoring and Mitigation Plan with regards to avian fatality monitoring and outcome evaluation (condition 10.5).<sup>80</sup> The Department coordinated with ODFW on drafting the amended language for conditions 10.7 and 10.5. On June 28, 2019, ODFW provided the Department with suggested edits to the draft amended conditions 10.7 and 10.5; the Department has incorporated these edits into the recommended amended conditions below (see Attachment I for full version of

400-foot survey area and incorporated the requirements of the T&E plant survey, pursuant to Condition 10.13, as the T&E plant survey protocol is ODFW-approved and the habitat and T&E plant surveys, while different, should be conducted concurrently and used to inform each of the survey outcomes.

SRWAMD4 Draft Proposed Order Public Comment Gilbert. 2019-02-22. On the record of the draft proposed order, Ms. Gilbert argues that the Department's recommended amendment to Condition 10.7, which specified that the pre-construction wildlife and plant surveys extend 400-feet from ground disturbing activities, is inconsistent with the 5 mile and ½-mile study area boundaries for the Council's T&E Species and Fish and Wildlife Habitat standards as defined in OAR 345-001-0010(59). She further argues that the survey area defined in the recommended amended Condition 10.7 is insufficient for evaluating potential impacts to raptors from wind turbine collision and fatality risk. While Gilbert disagrees with the survey area specified in the recommended amended Condition 10.7, her comments are specific to potential impacts to raptors from wind turbine collision and fatality risk. The scope of Condition 10.7 is not intended to address potential impacts to raptors from wind turbine collision and fatality risk, as Condition 10.7 applies to a final habitat assessment.

<sup>80</sup> Audio recording of May 17, 2019 EFSC meeting, at approximately timeline 3:22:30 of audio recording. Available at: <https://www.oregon.gov/energy/facilities-safety/facilities/Pages/Council-Meetings.aspx>



ODFW comment). Furthermore, in the June 28, 2019 comment, ODFW stated: “As we have stated consistently since this project’s inception, it is worth stating again that ODFW finds this project to be sited appropriately from a wildlife habitat impact perspective. The majority of impacts will occur on agricultural lands that do not provide functional habitat for wildlife. The compliment of species detected on this project, the limited impacts to functional habitat, and the survey methodologies proposed by the applicant are consistent with other permitted wind projects on the Columbia Plateau. Where impacts to wildlife habitat and sensitive species are unavoidable, ODFW has found this project’s proposed minimization and mitigation measures to be appropriate.”<sup>81</sup>

Based on direction from Council, and the analysis presented here including ODFW recommendations, the Department recommends Council adopt the following amended site certificate Condition 10.7.

**Recommended Amended Condition 10.7:** Before beginning construction, the certificate holder shall:

- a. Consider micrositing factors designed to minimize bird and bat collision risk including but not limited to locating wind turbines away from saddles in long ridges and locating wind turbines on the top of or slightly downwind of distinct ridges and set back from the prevailing upwind side. The certificate holder shall provide a map, to the Department and ODFW, showing the final design locations of all facility components and the areas of potential disturbance, and that identifies geographic and micrositing factors considered in final design.
- b. Hire a qualified professional biologist to conduct a pre-construction habitat survey (Condition 10.7) and Threatened and Endangered (T&E) plant survey (Condition 10.13). The surveys shall be conducted concurrently and in accordance with the survey protocol set forth in the Survey Protocol provided in Attachment G of the Final Order on Amendment 4 (for T&E plants and raptors), and in accordance with a survey protocol reviewed and approved by ODFW for habitat categorization. The survey area will include all areas within the micrositing corridor ~~and extending 200 feet, in accordance with the T&E plant survey protocol (Condition 10.13), from potential habitat (e.g. non-Category 6 habitat) disturbance.~~ The pre-construction habitat and

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<sup>81</sup> SRWAMD4. Sarah Reif ODFW Energy Coordinator, Comment to ODOE regarding Amended Proposed Order. 2019-06-28. Additionally, on July 1, 2019, Jeremy Thompson ODFW District Biologist, commented that he contends “it would be inappropriate to revisit the pre-construction vegetation assessment at this time, as the entire project area was impacted by large fires last year, and it will take a few years for the habitat to recover back to a state similar to what would be expected long term.” See Attachment I.

T&E plant survey shall be planned in consultation with the Department and ODFW, and shall include both desktop and field surveys to be confirmed with the Department and ODFW prior to conducting the surveys. The desktop survey shall evaluate habitat within ½-mile from the site boundary (analysis area). Field surveys shall be conducted the entirety of the micrositing corridor in areas that are not active agriculture (Category 6 habitat).

c. Following completion of the habitat and T&E plant surveys, and final layout design and engineering, the certificate holder shall provide the Department and ODFW a report containing the results of the survey, showing expected final location of all facility components, the habitat categories of all areas that will be affected by facility components, and the locations of any sensitive resources. The report shall present in tabular format the acres of expected temporary and permanent impacts to each habitat category, type, and sub-type. The pre-construction habitat survey shall be used to complete final design, facility layout, and any additional micrositing adjustment of facility components. Based on the field survey report, the Department in consultation with ODFW shall verify that the final facility layout, design, and construction timing minimizes impacts to non-Category 6 habitat, state-listed sensitive species, and state-listed threatened and endangered species. The report must be posted to the Department website. The results of the survey must be presented to EFSC at a future EFSC meeting by both the Department and ODFW staff. 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. [Final Order on Amendment 2; AMD4]

#### *Potential Impacts to Habitat*

As presented in Table 4, *Estimated Temporary and Permanent Habitat Impacts*, construction of the facility would include temporary loss of approximately 35.52 acres of Category 2 habitat, from construction laydown areas, widening of roads, and trenching for underground collector

lines, some of which would include temporal habitat loss.<sup>82,83</sup> Operation of the facility would permanently disturb and impact approximately 26.23 acres of Category 2 habitat.

### *Habitat Mitigation*

The mitigation goal for Category 2 habitat is no net loss of either habitat quantity or quality, and provision of a net benefit of habitat quantity or quality. To achieve this goal, impacts must be avoided, unavoidable impacts must be mitigated through “reliable in-kind, in-proximity” habitat mitigation to achieve no net loss, and a net benefit of habitat quantity or quality must be provided.

The certificate holder proposes to mitigate temporary habitat impacts through revegetation and weed control, in accordance with a Revegetation and Noxious Weed Control Plan (RNWCP), as approved by the Department and in consultation with the Wasco County Weed Department and ODFW, (Condition 5.6).<sup>84</sup> As provided in Attachment E of this order, the draft RNWCP is amended to provide additional clarification related to fixed point monitoring, and the selection of reference sites to measure the success of revegetation efforts; changes to success criteria provide quantifiable metrics to evaluate revegetation success. For example, success criteria must include the (a) degree of erosion, (b) vegetation density, (c) relative proportion of desirable vegetation, and (d) species diversity. Furthermore, the Department recommends amendment to the RNWCP to require “ground disturbing equipment” to be washed prior to entering or exiting the construction site; the plan with the amendment only mandated that “vehicles” be cleaned “prior to entering” the site.<sup>85</sup> A temporarily disturbed habitat area is determined to be successfully

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<sup>82</sup> *Final Order on the ASC*. (2011-08-19), p. 96-97

<sup>83</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 identified within the site boundary, based on pre-construction estimates, including Shrub-steppe is 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>84</sup> As presented in Attachment A of this order, the Department recommends Council administratively amend Condition 5.6 to reference the draft plan as Attachment E of the Final Order on Amendment 4 instead of the Final Order on Amendment 2.

<sup>85</sup> SRWAMD4. Draft Proposed Order Public Comment Gilbert. 2019-02-22. On the record of the draft proposed order, Ms. Gilbert expresses concern that the facility Weed Management Plan would not preclude the spread of weeds into the surrounding area (including Deschutes scenic waterway, farmland, and wildlife habitat) and is therefore not consistent with ORS 569.390. Ms. Gilbert argues that the facility RNWCP should require at least two monitoring and treatments per year, based on the expectation that weed development and seed cycles occur every 3 months; weed

1 revegetated when the habitat quality is equal to or better than its pre-construction state. Based  
2 on the draft amended RNWCP provided as Attachment E of this order, the Department  
3 recommends the Council find that the certificate holder would continue to meet the habitat  
4 mitigation goals for temporary habitat impacts.

5  
6 The certificate holder also proposes to provide compensatory habitat mitigation for certain  
7 temporary and permanent habitat impacts in the form of a conservation easement on a habitat  
8 mitigation area (HMA) in-proximity to the site boundary. For every 1 acre of temporary impacts  
9 to Category 2 habitat within ODFW's mapped Big Game Winter Range, the HMA would include 1  
10 acre of similar quality habitat, or approximately 35 acres. In addition to the mitigation proposed  
11 for temporary impacts to Category 2 habitat within ODFW's mapped Big Game Winter Range, the  
12 certificate holder similarly proposes to mitigate permanent and temporal (i.e. loss of habitat  
13 function and values from the time an impact occurs to the time when the restored habitat  
14 provides a pre-impact level of habitat function) habitat impacts at the HMA.

15  
16 The certificate holder proposes to mitigate permanent and temporal loss of Category 2 Shrub-  
17 steppe using a 2:1 acre ratio (i.e. 2 acres of similar quality habitat included in the HMA for every 1  
18 acre of habitat impacted). The certificate holder proposes to mitigate permanent loss of Category  
19 2 habitat located within ODFW's mapped Big Game Winter Range using a >1:1 acre ratio (i.e.  
20 more than 1 acre of similar quality habitat included in the HMA for every 1 acre of habitat  
21 impacted). While the certificate holder proposes differing acre ratios for permanent impacts to  
22 Category 2 Shrub-steppe habitat and Category 2 habitat within ODFW's Big Game Winter Range  
23 (i.e. a 2:1 acre ratio versus >1:1 acre ratio, respectively), the additional acreage included in the  
24 HMA for temporary habitat impacts, as described above, provides additional net benefit  
25 necessary to achieve ODFW's Category 2 habitat mitigation goal.

26  
27 In addition to the net benefit achieved by acquiring an HMA that includes acreage to offset  
28 temporarily impacted Category 2 habitat within ODFW's Big Game Winter Range, net benefit

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monitoring be required for the life of the facility; and consistent with ORS 569.445, a requirement that no machinery would use public roads prior to being cleaned. The Department does not agree that the statutes establishes specific requirements or schedules for monitoring and treatment of listed noxious weeds, as specified by Gilbert. However, the Department agrees that, consistent with ORS 569.390 and -445, weed monitoring should be required for the life of the facility and equipment washing should be required prior to entering and exiting the facility site; recommended edits are presented in Attachment E of this order.

would also be achieved through revegetation of temporarily impacted habitat, and through implementation of habitat enhancement actions as described in the draft amended Habitat Mitigation Plan. Based on the certificate holder's habitat mitigation plan, the HMA would include approximately 65 acres of Category 2 habitat as mitigation for permanent, temporal and temporary habitat loss. This approach satisfies ODFW's mitigation goal for Category 2 impacts of no net loss of either habitat quantity or quality, and provision of a net benefit of habitat quantity or quality. Neither the ODFW Mitigation Policy nor the EFSC Fish and Wildlife Habitat standard prescribe a specific methodology or approach for meeting the habitat mitigation goal.<sup>86</sup>

As compensatory mitigation, the certificate holder previously identified four habitat mitigation areas (HMA's) adjacent to the site boundary that range in size from 15 to 77 acres.<sup>87</sup> In 2010, ODFW stated that the proposed HMA's were acceptable as long as the certificate holder: (1) protects a spring-water and green-land area adjacent to mitigation site number 4; (2) protects seeding sage brush within mitigation site number 2; (3) constructs fencing at mitigation sites to preclude livestock trespass.<sup>88</sup> The Council previously approved the HMA's as sufficient to offset temporal and permanent impacts to Category 2 habitat, and imposed Condition 10.4 requiring that the certificate holder acquire an HMA and maintain, enhance and protect the HMA in accordance with a Habitat Mitigation Plan, as approved by the Department in consultation with ODFW. In the draft proposed order and original April 2, 2019 proposed order, the Department recommended Council amend Condition 10.4 requiring that, prior to construction, a current habitat assessment of the HMA's be conducted as part of the condition requirements, based upon the potential impacts of the 2018 wildfires and need for verification of the suitability of the previously identified HMA's to continue to satisfy the mitigation goal, as follows: In this amended proposed order, based on Council direction from the May 17, 2019 EFSC meeting, the Department recommends condition 10.4 be amended to clarify that the habitat assessment of the habitat mitigation site(s) must be field-based.

**Recommended Amended Condition 10.4:** Prior to construction, the certificate holder shall:

- a. Select qualified specialists (wildlife biologist/botanist) that have substantial experience in creating, enhancing, and protecting habitat mitigation areas within Oregon;
- b. Notify the Department of the identity and qualifications of the personnel or contractors selected to implement and manage the habitat mitigation area;

<sup>86</sup> SRWAMD4. Draft Proposed Order Public Comment Gilbert. 2019-02-22. On the record of the draft proposed order, Ms. Gilbert argues that the certificate holder's methodology for mitigating Category 2 habitat, designated Category 2 because of elk winter range, must be based on a 2:1 ratio to be consistent with OAR 345-022-0060 and OAR 635-415-0025.

<sup>87</sup> *Application for Site Certificate* Exhibit P

<sup>88</sup> *Application for Site Certificate*, Exhibit P, Attachment P-8

- c. Acquire the legal right to create, enhance, maintain and protect a habitat mitigation area, as long as the site certificate is in effect, by means of an outright purchase, conservation easement or similar conveyance;
- d. ~~Provide-Conduct~~ a field-based habitat assessment of the habitat mitigation sites, based on a protocol approved by the Department in consultation with ODFW, which includes methodology, habitat map, and available acres by habitat category and subtype in tabular format.
- e. Develop and submit a final Habitat Mitigation Plan (HMP) for approval by the Department in consultation with ODFW, based upon the draft amended HMP included as Attachment DG of the Final Order on Amendment #24. The Council retains the authority to approve, reject or modify the final HMP and any future amendments; and,
- f. Improve the habitat quality, within the habitat mitigation area, as described in the final HMP, and as amended ~~from time to time.~~  
[Final Order on Amendment 2; AMD4]

Council previously imposed Condition 10.12 restricting construction activities within ODFW's Big Game Winter Range mapped habitat, from December 1 through April 15. The Department, in consultation with ODFW, acknowledge that there may be exceptions to the seasonal restriction such as implementation of best management practices during that would effectively minimize potential impacts while allowing construction activities to continue. The request would need to include justification for lifting the restriction, which would include any actions that it would take 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. If the certificate holder is capable of demonstrating that construction would not result in any impacts to big game wildlife, then the purposes of the condition are satisfied and the certificate holder should not be arbitrarily constrained from constructing the facility, if the evidence demonstrates that doing so would not result in any impacts.<sup>89</sup>

In the draft proposed order and proposed order, the Department recommend~~sed~~ Council amend Condition 10.12 as follows:

<sup>89</sup> SRWAMD4. Draft Proposed Order Public Comment Gilbert. 2019-02-22. On the record of the draft proposed order, Ms. Gilbert expresses concern regarding the Department's recommended amended Condition 10.12, which provides a variance option to lift the construction activity seasonal restriction, December 1 through April 15, imposed to limited potential impacts to big game. In the proposed order, the Department further clarifies the circumstances required in order to lift the restriction.

**Recommended Amended Condition 10.12:** The certificate holder shall not conduct any construction activities on land mapped as Big Game Winter Range by the Oregon Department of Fish and Wildlife between December 1 and April 15. 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 big game and big game habitat in the relevant area. The Department will consult with ODFW on any request made under this condition. [Amended Final Order on Amendment 1 IV.G.2.2; AMD4]

In addition to proposing compensatory mitigation, as specified in the draft amended HMP (see Attachment D of this order), the certificate holder proposes to implement and monitor specific enhancement actions within the HMA. Habitat enhancement actions are proposed to further satisfy the Category 2 "net-benefit" mitigation goal including weed monitoring and control; seeding and planting sagebrush shrubs; implementation of a fire control plan; wildfire suppression; and grazing restriction. Based on the draft amended HMP provided as Attachment D of this order, the Department recommends the Council find that the certificate holder would continue to meet the habitat mitigation goals for permanent and temporal habitat impacts.

#### *State Sensitive Species*

The certificate holder conducted a desktop review of ODFW's 2017 Sensitive Species List to identify State Sensitive species with the potential to occur within the analysis area based on species range and existing habitat. State-sensitive species with a potential to occur or that were observed within the analysis area, from 2009 through 2018, are presented in Attachment H of this order. Based on this review, the certificate holder affirms that no new State Sensitive species were identified with a potential to occur within the analysis area since the Council's previous evaluation. Therefore, the Department provides a summary of previous surveys and identified species and conditions imposed for protection.

The Oregon Biodiversity Information Center and United States Fish and Wildlife Service surveys discovered 21 records of State Sensitive species within the Columbia Plateau Ecoregion with potential occurrence in the analysis area. Of those identified species, the following species were observed on site during field surveys: Bald Eagle; Brewer's Sparrow; Common Nighthawk; Ferruginous Hawk; Golden Eagle; Grasshopper Sparrow; Loggerhead Shrike; Long-Billed Curlew; Swainson's Hawk; Hoary Bat; Pallid Bat; Silver-Haired Bat.

Plant and wildlife field surveys were conducted in 2009 through 2010, and were updated in 2016. Avian use surveys were conducted in 2005 and 2010, and raptor nest surveys were conducted



1 between 2015 and 2016.<sup>90</sup> Raptor nest surveys evaluated areas within 0.5 mile of facility  
2 components and were conducted on May and June of 2015, as well as April 2016. The certificate  
3 holder's biologist surveyed suitable nesting substrates, which included trees, rock formations,  
4 transmission lines, and other structures. Whether a nest was determined to be "active" was  
5 based on the presence of eggs, young, or whitewash.

6  
7 Surveys conducted in 2015 identified five active raptor nests, and three inactive stick nests: three  
8 nests were red-tailed hawks and two nests were American Kestrels. The survey identified one  
9 active raven nest in an abandoned schoolhouse; however, the survey indicated that it was  
10 "unlikely" to be used by raptors other than a great horned owl.

11  
12 Surveys conducted in 2016 identified eight active raptor nests within the survey area, all of which  
13 were red tailed hawks. No special status raptor was found in any raptor survey.

14  
15 During the combined wildlife, plant, and habitat surveys – one ferruginous hawk was detected,  
16 and individual Swainson's hawk were detected on four occasions. The 2015-2016 raptor surveys  
17 indicated that two to four of the red-tailed hawk nests were within 0.25 mile of approved facility  
18 component location, and would likely have triggered construction restrictions if construction  
19 were to have commenced during the breeding season. As explained within this section, approved  
20 facility component location would be predominately within actively farmed land (dryland wheat),  
21 and does not contain areas cliffs or substantial rock outcrops, which support raptor habitat.

22  
23 In 2016, the certificate holder conducted pre-construction surveys during the breeding and  
24 rearing season for most terrestrial vertebrates, within 500 feet of the proposed facility  
25 components. The survey resulted in three detections of Loggerhead Shrikes and thirty-five  
26 detections of Grasshopper Sparrow. Twenty-five of the thirty-five detections of Grasshopper  
27 Sparrow occurred within the survey corridor associated with the transmission line, which at the  
28 time contained revegetated grassland, exotic annual grassland, rabbitbrush shrub-steppe, and  
29 buckwheat shrub-steppe. Both the Grasshopper Sparrow and the Loggerhead Shrike are expected  
30 to disperse to areas not directly impacted by facility construction. The Grasshopper Sparrow is a  
31 ground dwelling bird and is expected to disperse. The Loggerhead Shrike's habitat includes Big  
32 Sagebrush shrub steppe.

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<sup>90</sup>SRWAMD4Doc17. Request for Amendment 4 2019-01-16, Section 5.1.8

The Department and ODFW have not established a specific timeframe for which previous surveys are no longer considered valid, and relies upon, for amendments requesting to extend construction deadlines, the certificate holder's presentation of potential changes in land use or land cover to inform the necessity to conduct new surveys. In this case, the certificate holder most recently conducted Special-status plant and wildlife surveys in 2016, which are considered reasonably recent, and sufficient to evaluate compliance with Council's Fish and Wildlife Habitat and T&E Species standards.<sup>91</sup>

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

Potential impacts to State Sensitive wildlife species during facility construction and operation facility impacts, as evaluated in the *Final Order on ASC*, could include increased mortality of bird and bat species from wind turbine collision; grassland bird displacement from habitat loss; mortality risk from vehicle and equipment collision; and, noise-related disturbances during critical life stages (breeding and nesting).

#### *Mitigation for Potential Impacts to State-sensitive Species*

Council previously imposed the following conditions to minimize potential impacts to the above-described State Sensitive species during construction and operation:

- Condition 7.2 requires the certificate holder to install transformers in locked cabinets designed to avoid to the creation of artificial habitat for raptor prey.
- Condition 10.3 requires that, during construction, the certificate holder distribute maps to construction workers that identify areas used for nesting, and to avoid driving within the site boundary outside of approved surveyed construction areas.

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<sup>91</sup> SRWAMD4. Draft Proposed Order Comment Smallwood/FOCG 2019-02-22. On the record of the draft proposed order, Smallwood and Friends of the Columbia River Gorge argue that RFA4 fails to demonstrate compliance with the Council's Fish and Wildlife Habitat (OAR 345-022-0060) and Threatened and Endangered Species (OAR 345-022-0070) standards, and WCLUDO Section 19.030.C.5 based on an assertion that current habitat surveys, mapping, and categorization were not completed; updated field surveys for wildlife and plants were not completed; and the latest science and technologies for avoidance and mitigation of impacts was not considered.

- 1 • Condition 10.5 requires that, prior to construction, the certificate holder finalize its  
2 Wildlife Monitoring and Mitigation Plan (WMMP), as approved by the Department in  
3 consultation with ODFW. The WMMP includes a two-year post construction fatality  
4 monitoring program with search protocols developed by a statistician and considered to  
5 represent a statistically viable approach that is consistent with WMMPs for other EFSC  
6 facilities; post-construction grassland bird displacement study; short and long-term raptor  
7 nest monitoring; wildlife reporting and handling process; and data reporting  
8 requirements.<sup>92, 93</sup>
- 9 • Condition 10.7, as recommended amended, requires that the certificate holder  
10 demonstrate its evaluation of micro-siting factors to select final wind turbine locations that  
11 would minimize potential collision risk, and then conduct a pre-construction habitat  
12 assessment in combination with a T&E plant survey to inform habitat impacts and the  
13 compensatory mitigation obligation.
- 14 • Condition 10.6 requires that, during construction and operation, the certificate holder  
15 hires a qualified environmental professional to provide environmental worker training.  
16 Training must include information on onsite sensitive species locations, precautions to  
17 avoid the injury or destruction of wildlife, exclusion areas, permit requirements, and other  
18 environmental issues. Construction personnel must report any injured or dead wildlife to  
19 the onsite environmental manager.
- 20 • Condition 10.8 requires that, during facility design, the certificate holder minimize  
21 features that would allow avian perching, avoid collision, and follow most current  
22 suggested practices published by the Avian Power Line Interaction Committee for avian  
23 protection on powerlines.

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<sup>92</sup> As presented in Attachment A of this order, the Department recommends Council administratively amend Condition 10.5 to reference the draft plan as Attachment F of the Final Order on Amendment 4 instead of the Final Order on Amendment 2.

<sup>93</sup> SRWAMD4. Draft Proposed Order Comment Smallwood 2019-02-22. On the record of the draft proposed order, Smallwood recommends modifications to the certificate holder's post-construction fatality monitoring study methods to account for sources of uncertainty, biases and methodological efficacy. While there may be other methods to conduct and assess bird and bat fatalities, such as those recommended by Smallwood, the Department, the Council, and ODFW have historically relied upon the methods established in the draft WMMP, which are statistically viable, and importantly, are used by all EFSC wind facilities across the region. Condition 10.5 requires that the WMMP be finalized prior to construction, which provides the certificate holder, the Department, and ODFW the opportunity to make recommendations on changes to study methods and protocols, if necessary.

- Condition 10.14 requires that, prior to construction, the certificate holder conduct raptor nest surveys within ½-mile of ground disturbing activities, according to an approved protocol.<sup>94</sup> The results of the survey must be reported to the Department and ODFW. If raptor nests are identified within the survey area, then the certificate holder would be required to implement buffer distances from construction activities to the active nests during sensitive nesting and breeding seasons.<sup>95</sup>
- Condition 10.15 requires that, during construction, the certificate holder impose buffer distances from construction activities to active raptor nests identified during pre-construction surveys during sensitive nesting and breeding seasons.

Based on direction from Council at its May 17, 2019 meeting, the Department recommends edits to site certificate condition 10.5 related to the finalization of the Wildlife Monitoring and Mitigation Plan (Attachment F) prior to construction, and the implementation of the WMMP during facility operation. The direction from Council required that the final WMMP include clear direction that after the required two years of post-operational avian fatality monitoring, that the certificate holder consult with the Department and ODFW and that additional mitigation and monitoring must be provided if the results of the monitoring show that the facility has exceeded the thresholds of concern established in the WMMP, and that the results of the WMMP be presented to the Council. On June 28, 2019, ODFW provided the Department with a statement that it was satisfied with recommended amended Condition 10.5 (see ODFW comment in Attachment I).<sup>96</sup>

Based on direction from Council, and the analysis presented here including ODFW recommendations, the Department recommends Council adopt the following amended site certificate Condition 10.5. Please note that neither the draft proposed order nor the April 2, 2019

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<sup>94</sup> As presented in Attachment A of this order, the Department recommends Council administratively amend Condition 10.13 to reference the location of the Raptor Nest Survey Protocol as Attachment G of the Final Order on Amendment 4 instead of Attachment B of the First Amended Site Certificate.

<sup>95</sup> SRWAMD4. Draft Proposed Order Public Comment Gilbert. 2019-02-22. On the record of the draft proposed order, Ms. Gilbert argues that the raptor nest survey area needs to extend 10 miles from the site boundary, versus ½-mile as required under Condition 10.13, to adequately evaluate potential impacts to raptors from wind turbine collision and fatality risk under the Council's Cumulative Effects Standard for Wind Facilities. The Department clarifies that Condition 10.13 is not intended to address potential impacts to raptors from wind turbine collision and fatality risk, as it is used to inform Condition 10.15, which protects State-sensitive avian species during nesting and breeding seasons by imposing a buffer distance from construction activities to active nests during sensitive seasons.

<sup>96</sup> SRWAMD4. Sarah Reif ODFW Comment to ODOE regarding Amended Proposed Order. 2019-06-28. See [Attachment I](#).

proposed order contained substantive recommended edits to existing site certificate Condition 10.5.

**Recommended Amended Condition 10.5** Prior to construction, the certificate holder shall finalize the Wildlife Monitoring and Mitigation Plan (WMMP), based on the draft WMMP included as Attachment F of the Final Order on Amendment 4#2, as approved by the Department in consultation with ODFW. The certificate holder shall conduct wildlife monitoring as described in the final WMMP, as amended from time to time. The final WMMP shall specify that the first long-term raptor nest survey will be conducted in the first raptor nesting season that is at least 5 years after the completion of construction and is in a year that is divisible by five (i.e., 2020, 2025, 2030); the certificate holder shall repeat the survey at 5-year intervals thereafter. The final WMMP must include a requirement that the certificate holder consult with the Department and ODFW after concluding the required two-year operational avian fatality monitoring. If the results of the two-year operational avian fatality monitoring exceed thresholds of concern established in the WMMP, the certificate holder must provide additional mitigation in a form and amount agreed upon by the Department, in consultation with ODFW. If the two-year operational avian fatality monitoring results exceed thresholds of concern established in the WMMP, in addition to the mitigation that must be provided per this condition, the certificate holder must conduct an additional two-years of avian fatality monitoring, and report those results to the Department and ODFW for review and if necessary, further mitigation as agreed upon by the Department in consultation with ODFW. The results of the avian fatality monitoring must be posted to the Department website and presented to EFSC by Department and ODFW staff. [Final Order on Amendment 2; AMD4]

## **Conclusions of Law**

Based on the foregoing findings of fact and conclusions, and subject to compliance with existing and recommended amended site certificate conditions, the Department recommends the Council find that the facility would continue 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*

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

4  
5                   ***(2) For wildlife species that the Oregon Fish and Wildlife Commission has listed as***  
6                   ***threatened or endangered under ORS 496.172(2), the design, construction and***  
7                   ***operation of the proposed facility, taking into account mitigation, are not likely to***  
8                   ***cause a significant reduction in the likelihood of survival or recovery of the species.***

9  
10           **Findings of Fact**

11  
12           The Threatened and Endangered Species standard requires the Council to find that the design,  
13           construction, and operation of the facility are not likely to cause a significant reduction in the  
14           likelihood of survival or recovery of a fish, wildlife, or plant species listed as threatened or  
15           endangered by ODFW or Oregon Department of Agriculture (ODA). For threatened and  
16           endangered plant species, the Council must also find that the facility is consistent with an  
17           adopted protection and conservation program from ODA. Threatened and endangered species  
18           are those listed under ORS 564.105(2) for plant species, and ORS 496.172(2) for fish and wildlife  
19           species. For the purposes of this standard, threatened and endangered species are those  
20           identified as such by either the ODA or the Oregon Fish and Wildlife Commission.<sup>97</sup>

21  
22           The analysis area for threatened or endangered plant and wildlife species is the area within and  
23           extending five miles from the site boundary.

24  
25           ***Potential Impacts to Identified Threatened and Endangered Species***

26  
27           In order to identify endangered and threatened species that might occur within the analysis area,  
28           the certificate holder conducted desktop and field surveys in 2009, 2010, 2015, and 2016.<sup>98</sup> The  
29           certificate holder also conducted a desktop survey of 2017 and 2018 versions of ODFW and ODA  
30           lists and the 2018 ORBIC database to inform RFA4. The Department considers that the literature

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<sup>97</sup> Although the Council's Threatened and Endangered Species standard does not address federally-listed threatened or endangered species, a certificate holder must comply with all applicable federal laws, including laws protecting those species, independent of the site certificate.

<sup>98</sup> *Final Order on the ASC* (2011-08-19), p 108; *Final Order on Amendment 2* (2016-11-04), p. 131

review evaluated reasonably available sources. Desktop surveys identified a moderate likelihood of occurrence within the analysis area for the following two State listed threatened and endangered plant species: Tygh Valley milk-vetch; Dwarf evening primrose.

During the 2009-2010 and 2015-2016 surveys, no listed plant species were identified within the analysis area. Previous surveys included areas within 200 feet of the turbine string center lines, access roads, and other facilities.<sup>99</sup> The ODA confirmed that the plant surveys conducted in 2016 were satisfactory and did not require additional information.<sup>100</sup>

Field surveys from 2009-2010 identified four Bald Eagles; however, a database search did not identify any nests within the analysis area. Since 2012, the Bald Eagle has been delisted from the Oregon Fish and Wildlife Commission Oregon Endangered Species list. However, the Council previously found that Bald Eagle use of the area within the site boundary was limited and that the construction and operation of the facility would not result in a significant reduction to the likelihood of survival or recovery of Bald Eagles.

The Council previously found in its *Final Order on the ASC* that 12 detections of golden eagles during surveys<sup>101</sup> were of “distant birds flying over canyons rather than ridges where turbines are proposed,” and the Council previously found that the golden eagle is considered to be at “low risk” of collision. The certificate holder must comply with all federal rules relating to bald and golden eagles including the Federal Bald and Golden Eagle Protection Act, as well as the Federal Migratory Bird Treaty Act; however, compliance with federal eagle protection laws is a separate process from the ODOE EFSC site certificate process.<sup>102</sup>

The Department and ODFW have not established a specific timeframe for which previous surveys are no longer considered valid, and relies upon, for amendments requesting to extend construction deadlines, the certificate holder’s presentation of potential changes in land use or land cover to inform the necessity to conduct new surveys. In this case, the certificate holder

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<sup>99</sup> *Final Order on Amendment 2* (2016-11-04), p. 131

<sup>100</sup> *Final Order on Amendment 2* (2016-11-04), citing to Document SWRAMD2Doc21 Agency Review of Survey Results\_ODA 2016-06-29

<sup>101</sup> The Department received comments on the record of the draft proposed order, which noted that golden eagles were spotted in prior surveys.

<sup>102</sup> The Department received comments on the record of the draft proposed order, which raised concern that the project was not compliant with federal Eagle regulations.



1 most recently conducted Special-status plant and wildlife surveys in 2016, which are considered  
2 reasonably recent, and sufficient to evaluate compliance with Council’s Fish and Wildlife Habitat  
3 and T&E Species standards.<sup>103</sup>  
4

5 The Council previously imposed Conditions 10.2 (IV.G.2.2), 10.3 (IV.G.2.3), 10.6 (IV.G.2.6), which  
6 require in pertinent part, that facility design must minimize impacts to high quality habitat, that  
7 impacts to wildlife habitat are minimized through the limitation of construction impacts to areas  
8 used by wildlife, and that on-site environmental training of construction and operations  
9 personnel occur prior to ground disturbing activities. Furthermore, Council previously imposed  
10 Condition 10.13 and 10.14 that require the certificate holder conduct field surveys for State-listed  
11 threatened and endangered species, and raptor nests, prior to construction. If a State-listed T&E  
12 species is identified during the pre-construction surveys, the certificate holder would not be  
13 permitted to site facility components in or near those areas.<sup>104</sup>  
14

15 The Council also imposed condition 10.8 (IV.H.2.1), which requires the certificate holder to site  
16 transmission lines in accordance to the suggested practices of the Avian Power Line Interaction  
17 Committee, for meteorological towers to be non-guyed, and that turbine towers are smooth to  
18 reduce the risk of nesting. Condition 8.6 (V.C.2.8) requires transformers to be surrounded by  
19 gravel, which reduces artificial habitat for prey. Lastly, Condition 10.5 requires that the certificate  
20 holder follow a Wildlife Monitoring and Mitigation Plan (WMMP); the WMMP requires the

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<sup>103</sup> SRWAMD4. Draft Proposed Order Comment Smallwood/FOCG 2019-02-22. On the record of the draft proposed order, Smallwood and Friends of the Columbia River Gorge argue that RFA4 fails to demonstrate compliance with the Council’s Fish and Wildlife Habitat (OAR 345-022-0060) and Threatened and Endangered Species (OAR 345-022-0070) standards, and WCLUDO Section 19.030.C.5 based on an assertion that current habitat surveys, mapping, and categorization were not completed; updated field surveys for wildlife and plants were not completed; and the latest science and technologies for avoidance and mitigation of impacts was not considered.

<sup>104</sup> SRWAMD4. Draft Proposed Order Comment Smallwood 2019-02-22. On the record of the draft proposed order, Smallwood recommends that Condition 10.7, which requires that the certificate holder conduct preconstruction plant and wildlife surveys to inform a final habitat assessment, be amended to clearly state the purpose and objective of the surveys. Smallwood further recommends that the certificate holder be required to conduct detection surveys, described as “surveys of sufficient rigor that absence determinations can be justified if no members of the target species are found,” to both inform and prioritize location of the Condition 10.7 preconstruction plant and wildlife surveys and inform compensatory mitigation. Condition 10.13 requires that, prior to construction, the certificate holder conduct field surveys for T&E species, which would be conducted in accordance with a specific protocol of sufficient rigor for T&E species. The Department considers the surveys required by Condition 10.13 to be the detection surveys recommended by Smallwood. The results of the surveys would be used to inform final facility design, restricted areas, and sufficiency of existing conditions to protect any State-sensitive and T&E species.

1 certificate holder to conduct fatality searches and to engage in mitigation measures if the fatality  
2 rate of raptors exceeds the “threshold of concern.”

3  
4 The Department recommends that the Council conclude that the amendment would not be likely  
5 to cause a significant reduction in the likelihood or survival of any species listed as threatened or  
6 endangered because: the amendment request would not alter the site boundary or microsite  
7 corridor; the site boundary is predominantly Category 6 habitat and would not provide suitable  
8 habitat for three state listed species; the Council’s previously imposed conditions require the  
9 certificate holder to minimize risk to threatened or endangered species habitat and to comply  
10 with the WMMP.

### 11 12 **Conclusions of Law**

13  
14 Based on the foregoing findings of fact and conclusions, and subject to compliance with the  
15 existing site certificate conditions, the Department recommends that the Council find that the  
16 facility, with proposed changes, would comply with the Council’s Threatened and Endangered  
17 Species standard.

### 18 19 **III.J. Scenic Resources: OAR 345-022-0080**

20  
21 *(1) Except for facilities described in section (2), to issue a site certificate, the Council must*  
22 *find that the design, construction and operation of the facility, taking into account*  
23 *mitigation, are not likely to result in significant adverse impact to scenic resources and*  
24 *values identified as significant or important in local land use plans, tribal land*  
25 *management plans and federal land management plans for any lands located within*  
26 *the analysis area described in the project order.*

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

29  
30 The Scenic Resources standard requires the Council to find that the facility would not cause a  
31 significant adverse impact to identified scenic resources and values. To be considered under the  
32 standard, scenic resources and values must be identified as significant or important in local land  
33 use plans, tribal land management plans, and/or federal land management plans.

34  
35 The analysis area for scenic resources includes the area within and extending 20 miles from the  
36 site boundary. There are no lands administered by tribal governments within the analysis area.

37  
38 For amendments requesting to extend construction deadlines, the Department and Council  
39 evaluate whether there have been “changes in fact or law” since the site certificate or amended  
40 site certificate was issued to determine whether, based on changes in fact or law, the facility  
41 would continue to satisfy requirements of the standard. The certificate holder reviewed updates

1 to relevant land use and management plans and affirmed that there are no new important scenic  
2 resources or values beyond those that were previously evaluated by the Council.<sup>105</sup>

3  
4 Under the Scenic Resources standard, pursuant to OAR 345-021-0010(r)(C), potential visual  
5 impacts at identified resources from loss of vegetation or alteration of landscape and from facility  
6 structures or plumes during facility-related construction and operations are evaluated.

7  
8 The Council previously evaluated impacts to scenic resources in the *Final Order on the ASC, Final*  
9 *Order on Amendment 1*, and the *Final Order on Amendment 2*. These Final Orders discussed  
10 potential visual impacts to the Columbia River Gorge National Scenic Area (CRGNSA), Lower  
11 Deschutes River Canyon, White River Canyon, John Day River Canyon, Mt. Hood National Forest,  
12 Oregon National Historic Trail, Journey Through Time Scenic Byway, as well as Wasco County and  
13 Sherman County Resources. The Council concluded that the facility would not result in significant  
14 adverse impacts to these scenic resources because of (a) distance to the facility; (b) management  
15 plans did not preclude development on private property outside of managed areas; (c) turbines  
16 would be subordinate to surrounding landscape; (d) turbines were visible from areas that are  
17 generally inaccessible to the public (i.e., canyon walls and rims); (e) foliage is expected to block  
18 views; and (f) presence of other industrial uses or facilities within the vicinity.

19  
20 The certificate holder requests an extension to construction deadlines. The request for  
21 amendment does not include any change to the facility design, facility layout, or site boundary, or  
22 other changes that would result in new or different visual impacts. As such, the Department  
23 recommends that the Council find that the facility, with the requested extension of the  
24 construction deadlines, would not result in significant adverse impacts to any scenic area.

### 25 **Conclusion of Law**

26  
27  
28 Based on the foregoing findings of fact and conclusions of law, the Department recommends the  
29 Council find that the facility, with the requested extension of the construction deadlines, would  
30 continue to comply with the Council's Scenic Resources standard.

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<sup>105</sup> SRWAMD4Doc17 Request for Amendment 4 2019-01-16, Section 5.1.10

**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, requires the Council to find that a proposed facility, or facility with proposed changes, is not likely to result in significant adverse impacts to identified historic, cultural, or archaeological resources. Pursuant to OAR 345-022-0090(2), the Council may issue a site certificate for a facility that would produce power from wind energy without making findings regarding the Historic, Cultural and Archeological standard; however, the Council may impose site certificate conditions based upon the requirements of the standard.

The analysis area for the evaluation of potential impacts to identified historic, cultural or archeological resources, as defined in the project order, is the area within the site boundary.

For amendments requesting to extend construction deadlines, the Department and Council evaluate whether there have been “changes in fact or law” since the site certificate or amended site certificate was issued to determine whether, based on changes in fact or law, the facility would continue to satisfy requirements of the standard. To evaluate potential changes in fact within the analysis area since the previous evaluation, the certificate holder provided an updated literature review of the site boundary in November of 2018 utilizing the SHPO databases of cultural resources (OARRA and Historic Sites Database). The certificate holder indicates that all cultural resources were reported in the original surveys (Rooke 2010a and 2010b). No cultural resources have been recorded in the Site Boundary since the original surveys or issuance of the Site Certificate.

In its review of pRFA4, the State Historic Preservation Office confirmed that “the project would have no effect on any known cultural resources if the above ground historic resources... and below ground resources... are avoided. If these above and below ground historic resources are

1 avoided then no further research or work is needed with this project.”<sup>106</sup> In its review of pRFA4,  
2 the Confederated Tribes of Warm Springs, a Tribal Government with ceded lands within the  
3 analysis area, provided comment explaining that the certificate holder demonstrated a good faith  
4 effort to identify and avoid, based on compliance with previously imposed conditions, potentially  
5 eligible sites; and was satisfied that with imposition of existing conditions which require  
6 implementation of an inadvertent discovery plan (IDP), training of construction crews on the  
7 IDP.<sup>107</sup> Based on SHPO’s continued concurrence with the certificate holder’s impact assessment,  
8 CTWS comments, and because there are no new resources not previously evaluated, the  
9 Department recommends Council rely on its previous reasoning, analysis and conditions to  
10 conclude that the facility would continue not to be likely to result in a significant adverse impacts  
11 to any significant historic, cultural or archeological resources within the analysis area. To support  
12 the Council’s review of its previous analysis, the Department provides the following summary.  
13

14 In May 2009, for the initial evaluation of historic, cultural and archeological resources, the  
15 certificate holder conducted a records search, literature review and pedestrian survey. The  
16 survey area included 400-foot buffers from wind turbine and turbine string locations, and a 1000  
17 foot area surrounding the transmission line alignment.<sup>108</sup> During the initial review, the certificate  
18 holder identified 19 prehistoric archaeological sites, one historic archaeological site, 30 isolated  
19 finds, and 5 historical buildings within the analysis area. The certificate holder assumed that all  
20 sites would be considered “significant” and thereby proposed its facility design to avoid all  
21 impacts, including direct disturbance and indirect impacts, such as noise or visual, to identified  
22 resources.  
23

24 Based on review of the previous evaluation, the Department identified that the certificate  
25 holder’s impact assessment for the Center Ridge Schoolhouse, a previously identified  
26 aboveground historic resource within the analysis area, had not been evaluated within a previous  
27 Council order. Therefore, the Department presents its impact assessment in this section.  
28

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<sup>106</sup> SRWAMD4Doc7 pRFA4 Reviewing Agency Comments SHPO Case No.\_09-1281 2018-10-08; SRWAMD4Doc7-1 ASC  
Comments from SHPO 2009

<sup>107</sup> SRWAMD4Doc12 pRFA Tribal Gov Comments CTWS 2018-11-19

<sup>108</sup> As described in Section I.C. Description of Approved Facility Site Location, the approved microsites corridor  
includes a 1,300 foot corridor around areas of temporary and permanent disturbance. However, in order to utilize  
the entirety of the microsites corridor, based on the extent of the previously approved survey areas, the certificate  
holder must comply with Condition 11.3. Condition 11.3 requires that the certificate holder, prior to construction,  
conduct pre-construction surveys for potential historic, cultural and archeological resources in all areas that lie  
outside of previously surveyed areas.

*Center Ridge Schoolhouse*

The Center Ridge Schoolhouse (schoolhouse) is an aboveground historic resource, located within the site boundary, approximately 700-feet from wind turbine locations, once constructed. The schoolhouse was erected in 1889 and operated as a school until 1929. The building is abandoned and experienced squatters; however, the schoolhouse was important to the education of many of the current residents and therefore, the certificate holder described that the building possesses “integrity of setting, location, workmanship, materials, design, feeling and association.”

Potential impacts could include increased noise and visual impacts from facility construction and operation, and structural damage from construction-related traffic. The schoolhouse would be located 700 feet away from wind turbines and therefore would not be expected to experience direct disturbance impacts. Relating to permanent changes to the visual surrounding, the certificate holder indicated that wind turbines would be visible from the “front elevation of the building” but that such view “should not” adversely impact its “historic setting.” The schoolhouses’ five “picture window[s],” which are directed southwest and encompass a view of Mt. Hood, would not be impacted because wind turbines would be located to the southeast.<sup>109</sup> Although not previously referenced in a Council order, SHPO provided comment in 2009 confirming that, based on the certificate holder’s evaluation, there would be “no effect” from visual or noise impacts of the facility to the Center Ridge Schoolhouse.<sup>110</sup>

The Council imposed 6 conditions, 11.1 through 11.6, which in pertinent part require the certificate holder to: implement 200 foot buffers around all rock alignment and cairn sites and 100 foot buffers from all archaeological sites; conduct a field investigation of all areas to be disturbed during construction that lie outside previously-surveyed areas; train personnel in the identification of cultural materials and avoidance measures; and to prepare and implement an Archaeological Monitoring Plan.

**Conclusions of Law**

Based on the foregoing recommended findings of fact and conclusions, the Department recommends that the Council find that the facility, with the requested extension of the

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<sup>109</sup> *Application for Site Certificate*, Exhibit S

<sup>110</sup> SRWAMD4Doc7-1 ASC Comments from SHPO 2009

1 construction deadlines, would continue to comply with the Council’s Historic, Cultural, and  
2 Archaeological Resources standard.

3  
4 **III.L. Recreation: OAR 345-022-0100**

5  
6 *(1) Except for facilities described in section (2), to issue a site certificate, the Council must*  
7 *find that the design, construction and operation of a facility, taking into account*  
8 *mitigation, are not likely to result in a significant adverse impact to important recreational*  
9 *opportunities in the analysis area as described in the project order. The Council shall*  
10 *consider the following factors in judging the importance of a recreational opportunity:*

11  
12 *(a) Any special designation or management of the location;*

13 *(b) The degree of demand;*

14 *(c) Outstanding or unusual qualities;*

15 *(d) Availability or rareness;*

16 *(e) Irreplaceability or irretrievability of the opportunity.*

17 \*\*\*

18  
19 **Findings of Fact**

20  
21 The Recreation standard requires the Council to find that the design, construction, and operation  
22 of a facility would not likely result in significant adverse impacts to “important” recreational  
23 opportunities. Therefore, the Council’s Recreation standard applies only to those recreation areas  
24 that the Council finds to be “important,” utilizing the factors listed in the sub-paragraphs of  
25 section (1) of the standard. The importance of recreational opportunities is assessed based on  
26 five factors outlined in the standard: special designation or management, degree of demand,  
27 outstanding or unusual qualities, availability or rareness, and irreplaceability or irretrievability of  
28 the recreational opportunity. The certificate holder evaluates impacts to important recreational  
29 opportunities based on the potential of construction or operation of the facility, with proposed  
30 changes, to result in any of the following: direct or indirect loss of a recreational opportunity,  
31 excessive noise, increased traffic, and visual impacts of facility structures or plumes.

32  
33 **Recreational Opportunities within the Analysis Area**

34  
35 In RFA4, the certificate holder represents that no new, important recreational opportunities were  
36 identified within the 5-mile analysis area; the Department confirmed with the Wasco County



1 Planning Department that there are no new important recreational opportunities within Wasco  
2 County.<sup>111</sup> The important recreational opportunities within the 5-mile analysis area include:

- 3 • Cottonwood Canyon State Park
- 4 • Deschutes River Corridor
- 5 • Lower Deschutes Back Country Byway
- 6 • Mack's Canyon Archaeological and Recreational Site
- 7 • Wasco County Scenic Highway Segments

#### 8 9 Evaluation of Potential Impacts to Important Recreation Opportunities

10  
11 Under the Council's Recreation standard, the Council must find that, taking into account  
12 mitigation, the facility, with proposed changes, is not likely to result in a significant adverse  
13 impact to those identified important recreational opportunities.<sup>112</sup>

14  
15 The Council previously found that noise resulting from construction and operation of the facility  
16 would not be audible at any important recreational area.<sup>113</sup> The certificate holder utilized the  
17 Computer Aided Noise Abatement (CadnaA) version 3.72 (2009) software program, to predict  
18 peak noise levels during facility operation; the noise modelling included consideration of noise  
19 attenuation to account for distance, atmosphere, and ground attenuation. Additionally, current  
20 site certificate Condition 5.14 requires the certificate holder to provide the Department evidence  
21 demonstrating that the certificate holder has obtained a guarantee from the turbine  
22 manufacturer for those turbines located within one mile of the boundaries of the Deschutes Wild  
23 and Scenic River and the Deschutes State Scenic Waterway that that maximum sound would not  
24 exceed 109 dBA plus 2 dB uncertainty; the Council previously found that the facility, subject to  
25 compliance with Condition 5.14, would not result in a significant adverse impact to any protected  
26 area.<sup>114</sup> Given that the Deschutes River recreational opportunities overlap with areas under the

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<sup>111</sup> SRWAMD4Doc17 Request for Amendment 4 2019-01-16, Section 5.1.12; SRWAMD4Doc8-2 Response from Angie Brewer at Wasco County re recreational opportunities 2018-11-06

<sup>112</sup> SRWAMD4. Draft Proposed Order Public Comments. 2019-02-22. The Department received comments on the record of the draft proposed order, which raised concerns that impacts visual and noise impacts to recreational opportunities was not properly evaluated.

<sup>113</sup> *Final Order on the ASC* (2011-08-19), p. 123; *Final Order on Amendment 1* (2015-08-07) p. 89

<sup>114</sup> *Final Order on AMD 2* (2016-11-04), p. 113

1 Protected Areas standard, protections ensured by Condition 5.14 also demonstrate that there  
2 would not be significant adverse noise impacts to these recreational areas.

3  
4 Traffic delays due to construction would be temporary and would not affect highways or overall  
5 traffic; the Council previously found impacts relating to traffic to be “negligible.”<sup>115</sup>

6  
7 Turbines would be visible in various locations along the Deschutes River and within the Mack’s  
8 Canyon Archaeological and Recreational area; however, the Council previously found that such  
9 views would be “negligible” and “subordinate to the surrounding landscape.”<sup>116</sup> Turbines would  
10 be intermittently visible along the Deschutes River Corridor.<sup>117</sup> However, the Council found that,  
11 generally, views of turbines would be limited to distances of two or more miles.<sup>118</sup> Current site  
12 certificate Condition 6.23 requires the certificate holder implement a lighting plan to ensure that  
13 all lighting is directed downward and limited in intensity, except otherwise necessary to meet  
14 FAA requirements. The Mack’s Canyon Archaeological Site is not managed for its scenic quality;  
15 the relevant management plan (Two Rivers Resources Management Plan) protects remnants of  
16 prehistoric dwellings.<sup>119</sup> The Council did not previously impose any conditions relating to the  
17 Recreation standard.

18  
19 The request for amendment does not include changes to the site boundary, facility design, facility  
20 layout, or other changes that could reduce public access to recreational opportunities or increase  
21 noise or traffic resulting from facility construction or operation. Furthermore, the request for  
22 amendment does not include changes to the facility structures, layout, or emissions that would  
23 result in visual impacts. As such, based on the fact that there are no changes in fact or law  
24 relevant to the Recreation standard, the Department recommends Council find that the facility,  
25 with the requested extension of the construction deadlines, would not result in a significant  
26 adverse impact to any important recreational opportunity.

## 27 28 **Conclusions of Law**

29  
30 Based on the foregoing recommended findings of fact and conclusions, the Department  
31 recommends that the Council find that the facility, with the requested extension of the  
32 construction deadlines, would continue to comply with the Council’s Recreation standard.

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<sup>115</sup> *Final Order on the ASC* (2011-08-19), p. 123-124

<sup>116</sup> *Final Order on the ASC* (2011-08-19), p. 123-124

<sup>117</sup> *Final Order on the ASC* (2011-08-19), p. 123

<sup>118</sup> *Final Order on the ASC* (2011-08-19), p. 123

<sup>119</sup> ASC Exhibit T, p. 4 (August 2010)

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

*(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 impact to the ability of public and private providers within the analysis area described in the project order to provide: sewers and sewage treatment, water, storm water drainage, solid waste management, housing, traffic safety, police and fire protection, health care and schools.*

*(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**

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

The analysis area for potential impacts to public services from construction and operation of the facility, with proposed changes, is defined as the area within and extending 10-miles from the site boundary.

**Sewers and Sewage Treatment, Water, and Stormwater Drainage**

Construction and operation of the facility, with proposed changes, would not affect the ability of public and private providers of water, sewer or sewage treatment, or stormwater drainage to deliver services.

As described in RFA4, the facility, with proposed construction deadline extension, would not change construction or operational water use or source, sewer or sewage treatment needs, or

1 stormwater drainage from what was previously found by Council.<sup>120</sup> As described in the *Final*  
2 *Order on the ASC*, the Council found that facility water use would not impact private or public  
3 water and treatment service providers; the certificate holder confirmed with The Dalles Public  
4 Works Department that it is still capable of providing water in the amount originally requested  
5 in the *Application for Site Certificate*.<sup>121</sup> Facility sewage treatment needs would be  
6 accommodated through portable toilets during construction (Condition 6.2), and an onsite  
7 septic system would be installed for operational use (Condition 7.8).

8  
9 The Council previously found that facility stormwater drainage needs would not impact  
10 stormwater drainage systems because the facility would not be connected to a public  
11 stormwater drainage system.<sup>122</sup> Based on the Council's previous reasoning and because the  
12 facility, with proposed changes, would not result in changes to water use or source, sewer or  
13 sewage treatment needs, or stormwater drainage, the proposed extension to construction  
14 deadlines would not be likely to result in a significant adverse impact to public and private  
15 providers of water, sewers and sewage treatment, or stormwater drainage.

#### 16 17 Solid Waste Management

18  
19 Construction and operation of the facility, with the proposed extension of the construction  
20 deadlines, would not alter the type or amount of solid waste generated during construction or  
21 operation from levels previously evaluated by the Council. The Council previously imposed  
22 Conditions 6.3 (V.D.2.1), which requires the certificate holder to develop a Construction Waste  
23 Management Plan and Condition 10.11 (V.D.2.2), which requires the certificate holder to  
24 implement an Operational Waste Management Plan. The Council previously found that the  
25 facility would not be likely to result in a significant adverse impact to public and private service  
26 providers of solid waste management. Based on the Council's previous reasoning and because  
27 the facility, with proposed construction deadline extension, would not result in changes to solid  
28 waste generation during construction or operation, the proposed extension to construction

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<sup>120</sup> SRWAMD4Doc17 Request for Amendment 4 2019-01-16, Section 5.1.13

<sup>121</sup> SRWAMD4Doc17 Request for Amendment 4 2019-01-16, Section 5.1.13, citing to Letter from Ray Johnson City of The Dalles Public Works Department, 08/02/2018

<sup>122</sup> *Final Order on the ASC* (2011-08-19), p. 139

1 deadlines would not be likely to result in a significant adverse impact to public and private  
2 providers of solid waste management.

3  
4 Housing, Police Services, Health Care and Schools  
5

6 The construction and operation of the facility, with the proposed extension of the construction  
7 deadlines, would result in the presence of temporary and permanent employees; the increase  
8 in size of the local workforce could affect public and private providers of housing, police  
9 services, health care, and schools. As described in RFA4, however, the amendment would not  
10 change the previously estimated temporary or permanent number of workers.<sup>123</sup>  
11

12 The certificate holder provides updates to its population and housing assumptions. The  
13 population within 30 miles of the project site increased from 30,925 in 2008 to 34,066 in  
14 2017.<sup>124</sup> Housing units in Gilliam, Hood River, Sherman, Wasco, and Klickitat counties increased  
15 by 14% from 2008 to 2016, to a total of 32,881 housing units. During this time period, housing  
16 vacancies increased from 9.5% to 15% in these counties.<sup>125</sup> The Council found in the *Final Order*  
17 *on the ASC* that the presence of 26 employees (average operational employees) and a  
18 maximum of 250 employees (during construction) would not result in a significant adverse  
19 impact to housing providers. Because the number of vacant housing units has increased, and  
20 the estimated number of construction and operations personnel remains the same, facility  
21 personnel demand for housing would not be likely to result in a significant adverse impact on  
22 housing availability in the analysis area.  
23

24 The certificate holder confirmed with the Wasco County Sheriff's Office that it agrees with the  
25 previous sheriff's statement that the sheriff "did not foresee any conflicts or problems that  
26 would result from the project..."<sup>126</sup> As such, the construction deadline extension would not  
27 would not be likely to result in a significant adverse impact to law enforcement services.  
28

29 The Council previously found that the facility would not result in significant adverse impacts to  
30 the providers of healthcare services.<sup>127</sup> The Council previously imposed Condition 9.4 (V.C.2.4)  
31 and Condition 9.5 V.C.2.5), which require the certificate holder to implement on-site health and  
32 safety plans throughout the construction and operation of the facility. The extension of the  
33 construction deadlines would not change the number of construction workers temporarily

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<sup>123</sup> SRWAMD4Doc17 Request for Amendment 4 2019-01-16, Section 5.1.13

<sup>124</sup> *Id.*

<sup>125</sup> *Id.*

<sup>126</sup> *Id.*

<sup>127</sup> *Final Order on the ASC* (2011-08-19), p. 141

1 locating in the area or the number of permanent employees and their families moving into the  
2 area that would seek health care services.

3  
4 The extension of the construction deadlines would not change the number of permanent  
5 employees and their families moving into the area that would add to the number of students  
6 attending area schools.

#### 7 8 Traffic Safety

9  
10 The Council previously imposed Conditions 5.9, 6.17, 6.18, 6.19, 6.20 (V.C.2.12 –V.C.2.16).  
11 These conditions require the receipt of permits from the Oregon Department of Transportation;  
12 compliance with Wasco County Road Department for all access road construction; consultation  
13 with Wasco County Public Works Department to ensure no unusual damage to roads; to restore  
14 public roads to pre-construction condition; and the implementation of measures to reduce  
15 traffic impacts during construction.<sup>128</sup> The facility, with the requested extension of the  
16 construction deadlines, would not alter previously evaluated traffic impacts.

#### 17 18 Fire Protection

19  
20 The facility, with the proposed extension of the construction deadlines, would not alter  
21 previously evaluated impacts to fire protection service providers. In RFA4, the certificate holder  
22 indicates that it contacted the Dufur Volunteer Fire and Ambulance and received confirmation  
23 that Dufur Volunteer Fire and Ambulance would respond in the event of an emergency.<sup>129</sup> In  
24 the *Final Order on the ASC*, the Council noted that that Columbia Rural Fire District would be  
25 the first responder in the event of a ground fire and the City of Dufur Fire District would be the  
26 first responder in the event of a structural fire. The Council previously imposed Conditions 8.2  
27 through 8.5, which require that (1) the certificate holder ensure that operations personnel are  
28 trained for tower rescue; (2) the certificate holder develop and implement fire safety plans in  
29 consultation with the Columbia Rural Fire District to minimize fire risks; and (3) provide a site  
30 plan to the Columbia Rural Fire District and updated contact list to the Columbia Rural Fire  
31 District. Compliance with existing conditions would address and minimize potential adverse

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<sup>128</sup> Potential impacts to air traffic safety are discussed in Section III.P.1 *Public Health and Safety Standards for Wind Energy Facilities* (OAR 345-024-0010).

<sup>129</sup> SRWAMD4Doc17 Request for Amendment 4 2019-01-16, Section 5.1.13

1 impacts from construction and operation of the facility, with the requested extension of the  
2 construction deadlines, to public providers of fire protection.

3  
4 **Conclusions of Law**

5  
6 Based on the foregoing recommended findings of fact and conclusions, the Department  
7 recommends that the Council find that the facility, with the requested extension of the  
8 construction deadlines, would continue to comply with the Council's Public Services standard.

9  
10 **III.N. Waste Minimization: OAR 345-022-0120**

11  
12 *(1) Except for facilities described in sections (2) and (3), to issue a site certificate, the*  
13 *Council must find that, to the extent reasonably practicable:*

14  
15 *(a) The applicant's solid waste and wastewater plans are likely to minimize*  
16 *generation of solid waste and wastewater in the construction and operation of the*  
17 *facility, and when solid waste or wastewater is generated, to result in recycling and*  
18 *reuse of such wastes;*

19 *(b) The applicant's plans to manage the accumulation, storage, disposal and*  
20 *transportation of waste generated by the construction and operation of the facility*  
21 *are likely to result in minimal adverse impact on surrounding and adjacent areas.*

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

26 \*\*\*

27  
28 **Findings of Fact**

29  
30 As provided in section (1) above, the Waste Minimization standard requires the Council to find  
31 that the applicant (certificate holder) will minimize the generation of solid waste and  
32 wastewater, and that the waste generated will be managed to result in minimal adverse  
33 impacts to surrounding and adjacent areas. Pursuant to OAR 345-022-0120(2), the Council may  
34 issue a site certificate for a facility that would produce power from wind energy without making  
35 findings regarding the Waste Minimization standard; however, the Council may impose site  
36 certificate conditions based upon the requirements of the standard.



1 The *Final Order on the ASC* discussed construction-related impacts to the generation of solid  
2 waste, as well as wastewater and hazardous materials management.<sup>130</sup> In RFA4, the certificate  
3 holder asserts that the proposed construction deadline would not affect the certificate holder's  
4 ability to comply with existing site certificate conditions.<sup>131</sup>

5  
6 To address the standard, the Council previously imposed Conditions 6.3 (V.D.2.1) and 10.1  
7 (V.D.2.2), which require the certificate holder to develop and implement a solid waste  
8 management plan during construction and operation, respectively. Condition 7.8 (V.C.2.2)  
9 requires the certificate holder to discharge sanitary wastewater generated at the O&M facilities  
10 to licensed on-site septic systems in compliance with State permit requirements. The proposed  
11 extension to construction deadlines would not require modifications to the procedures and  
12 practices to be used to handle solid waste and wastewater, nor impact the certificate holder's  
13 ability to comply with site certificate conditions.

#### 14 15 **Conclusions of Law**

16  
17 Based on the foregoing recommended findings of fact and conclusions, the Department  
18 recommends that the Council find that the facility, with the requested extension of the  
19 construction deadlines, would continue to comply with the Council's Waste Minimization  
20 standard.

#### 21 22 **III.O. Division 23 Standards**

23  
24 The Division 23 standards apply only to "nongenerating facilities" as defined in ORS  
25 469.503(2)(e)(K), except nongenerating facilities that are related or supporting facilities. The  
26 facility, with proposed changes, would not be a nongenerating facility as defined in statute and  
27 therefore Division 23 is inapplicable to the facility, with proposed changes.

#### 28 29 **III.P. Division 24 Standards**

30  
31 The Council's Division 24 standards include specific standards for the siting of energy facilities,  
32 including wind projects, underground gas storage reservoirs, transmission lines, and facilities  
33 that emit carbon dioxide.  
34

---

<sup>130</sup> *Final Order on the Application* (2011-08-19), p. 149

<sup>131</sup> SRWAMD4Doc17 Request for Amendment 4 2019-01-16, Section 5.1.4

1        III.P.1. Public Health and Safety Standards for Wind Energy Facilities: OAR 345-024-0010

2  
3        *To issue a site certificate for a proposed wind energy facility, the Council must find that the*  
4        *applicant:*

5  
6            *(1) Can design, construct and operate the facility to exclude members of the public from*  
7            *close proximity to the turbine blades and electrical equipment.*

8  
9            *(2) Can design, construct and operate the facility to preclude structural failure of the tower*  
10          *or blades that could endanger the public safety and to have adequate safety devices and*  
11          *testing procedures designed to warn of impending failure and to minimize the consequences*  
12          *of such failure.*

13  
14        **Findings of Fact**

15  
16        OAR 345-024-0010 requires the Council to consider specific public health and safety standards  
17        related to wind energy facilities. For a proposed facility, or facility with proposed changes, the  
18        Council must evaluate a certificate holder's proposed measures to exclude members of the  
19        public from proximity to the turbine blades and electrical equipment, and the certificate  
20        holder's ability to design, construct and operate the proposed facility, or facility with proposed  
21        changes, to prevent structural failure of the tower or blades and to provide sufficient safety  
22        devices to warn of failure.

23  
24        For amendments requesting to extend construction deadlines, the Department and Council  
25        evaluate whether there have been "changes in fact or law" since the site certificate or amended  
26        site certificate was issued to determine whether, based on changes in fact or law, the facility  
27        would continue to satisfy requirements of the standard. The certificate holder reviewed  
28        changes to facts or law that would affect the certificate holder's ability to comply with the  
29        standard.

30  
31        *Potential Public Health and Safety Impacts from Proximity to Turbine Blades*

32  
33        Wind turbines could result in public health and safety impacts to low flying aircraft. The  
34        certificate holder does not propose an increase to turbine height nor an increase to blade size  
35        specifications; as such, there are no new unevaluated risks that could relate to aircraft.

1 As a summary, the facility is approved to construct turbines with a maximum blade tip height of  
2 152 meters (499 feet).<sup>132</sup> As such, the facility was evaluated under the Wasco County Land Use &  
3 Development Ordinance Section 19.030(C)(1). This provision requires any structure that exceeds  
4 200 feet to comply with air hazard rules promulgated by the Oregon Department of Aviation as  
5 well as the Federal Aviation Administration (FAA). Condition 5.4 requires the certificate holder to  
6 submit, prior to construction, a Notice of Proposed Construction or Alteration to the FAA; the  
7 certificate holder must provide a copy of a “Determination of No Hazard” for all turbine towers  
8 and meteorological towers to the Department. Furthermore, the certificate holder must also  
9 comply with Condition 6.23, which requires the certificate holder to warn the FAA of  
10 obstructions, and it must also design and implement a lighting plan.

11  
12 Because there are no proposed changes to facility design, the existing site certificate conditions  
13 are sufficient to ensure public health and safety relating to potential impacts from proximity to  
14 turbine blades.

15  
16 *Potential Impacts from Structural Failure of the Tower or Blades; Safety Devices and Testing*  
17 *Procedures to Warn of Impending Failure*

18  
19 The facility could result in public health and safety risks from potential blade failure from  
20 stresses that exceed the design parameters of the blade or its connection to the hub. However,  
21 there are no proposed changes to facility design. In RFA4, the certificate holder reported that it  
22 experienced two incidents relating to tower failure during the operation of two facilities  
23 elsewhere in the US.<sup>133</sup> One incident did not result in a “throw event,” however, the blade was  
24 replaced. A second incident resulted in a tower failure when a blade struck a tower and the  
25 blade was detached; the turbine tower failed. The certificate holder identified a failure in the  
26 shear web within the blade. The certificate holder indicated that it worked with the  
27 manufacturer to identify all turbine types that could result in a similar event and represented  
28 that it retrofitted all other blades to address the issue.<sup>134</sup>

29  
30 The certificate holder represents that it maintains experience developing wind facilities in cold  
31 weather climates, and has developed protocols to minimize the risk of ice throw.<sup>135</sup> The  
32 certificate holder indicates that the turbine controller is capable of recognizing when ice is

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<sup>132</sup> Third Amended *Site Certificate*, p. 4

<sup>133</sup> Note that the Council acknowledged that PEGLP had developed, owned, and operated over 4,500 MW of renewable energy generation and also that it had constructed 19 wind and solar projects. *At Final Order on AMD 3*, p. 9

<sup>134</sup> SRWAMD4Doc17. Request for Amendment 4, Section 5.1.2. 2019-01-16.

<sup>135</sup> *Id.*

present on a blade because the blade is heavier; the controller ceases the operation of a blade that contains ice. The turbine is not operated until the ice has melted or otherwise dropped from the turbine blade. In addition to operational measures, the certificate holder represents that it maintains safety protocols to ensure the safety of the public, landowners, and wind facility staff.

As described above, OAR 345-024-0010(2) requires the Council to find that the certificate holder can design, construct and operate the facility to preclude structural failure of the tower or blades that could endanger public safety. In other words, the Council must evaluate if the certificate holder has demonstrated that it has the ability to preclude a structural failure in the first place through design, construction and operation of the wind turbines. The standard then requires that the certificate holder demonstrate its ability to design, construct and operate the facility to avoid structural failure, to have adequate mechanisms in place to warn of an impending failure, and to minimize the consequences of such failure. The site certificate includes a number of existing conditions (Condition 6.28, 7.4, 7.5 and 7.6) that would continue to apply to the facility that were imposed to address subsection (2) of the standard, and which would ensure that the certificate holder reduces the risk of potential impacts from structural failure of the tower or blades, as described below.

Condition 7.4 requires that the certificate holder follow manufacturer recommendations or procedures for handling during wind turbine transport and delivery. In the draft proposed order and proposed order, the Department recommend~~see~~ an administrative change to Condition 7.4 as follows:

**Recommended Amended Condition 7.4:** The certificate holder shall follow manufacturers' recommended handling instructions and procedures to prevent damage to turbine or turbine tower components that could lead to failure. In the compliance plan required per OAR 345-026-0048, the certificate holder shall describe the process or protocol to be implemented to ensure that manufacturer's handling instructions and procedures are followed during equipment delivery. [Final Order IV.K.2.5; AMD4]

Condition 7.5 requires the certificate holder to develop and implement an operational safety-monitoring program that includes regular inspections and maintenance. In the draft proposed order and proposed order, the Department recommend~~see~~ amendments Condition 7.5 in order to clarify the specific requirements of the operational safety-monitoring program:

**Recommended Amended Condition 7.5:** Prior to operation, the certificate holder shall:  
a) ~~have~~ Submit to the Department, for review and approval, an operational safety-monitoring program and that includes a cause analysis program. The safety-monitoring program shall include, at a minimum, requirements for regular turbine blade and turbine tower component inspections and maintenance, based on wind turbine manufacturer recommended frequency.

- 1           b) ~~shall~~ Document the inspection of and maintenance activities of all turbine and  
2           turbine tower components on a regular basis. The inspection documentation must  
3           include, but is not limited to, the date, turbine number, inspection type (regular or  
4           other), turbine tower and blade condition, maintenance requirements (i.e.  
5           equipment used, component repair or replacement description, impacted area  
6           location and size), and wind turbine operating status. This information shall be  
7           submitted to the Department pursuant to OAR 345-026-0080 in the facility's annual  
8           compliance report. The certificate holder shall maintain or repair turbine and  
9           turbine tower components as necessary to protect public safety.  
10          c) In the event of blade or tower failure, the certificate holder shall report the incident  
11          to the Department within 72 hours, in accordance with OAR 345-026-0170(1), and  
12          shall, within 90 days of a blade or tower failure event, submit a root cause analysis  
13          to the Department for compliance evaluation.  
14          [Final Order IV.K.2.6; AMD4]

15  
16          Condition 7.6 requires the installation of self-monitoring devices on each wind turbine that  
17          would alert operators of dangerous conditions and would also automatically shut down  
18          turbines in the event of abnormal levels of vibration. Condition 7.6 monitors conditions that  
19          would indicate a risk of vibration or abnormal equipment malfunction, such as potential blade  
20          failure or ice accumulation.

21  
22          Finally, Condition 6.28 requires that the facility be constructed in compliance with setback  
23          requirements equivalent to 1.5 times the maximum blade tip height from public road rights-of-  
24          way, adjacent non-project property lines, and any aboveground major facility line; a lesser  
25          setback requirement of 1.1 times the maximum blade tip height applies to 17 wind turbines,  
26          previously granted by Council through approval of a variance, and any aboveground minor  
27          utility facility line. Condition 6.28 also establishes a 1-mile setback requirement from non-  
28          resource zoned property boundaries located outside of urban growth boundaries or urban  
29          reserves within Wasco County. The setback restrictions imposed in Condition 6.28 were not  
30          imposed to satisfy OAR 345-024-0010 or eliminate all public health and safety risks from events  
31          such as blade or ice throw, as the standard does not establish a minimum setback requirement  
32          nor require an evaluation of blade or ice throw distance and risk. Condition 6.28 was imposed

to align with Wasco County’s Land Use Development Ordinance Section 19.030 Section (D)(1)(c)(2) and –(4), which establishes setback distances based on a predicted fall-height.<sup>136</sup>

The Department finds that the imposition of these conditions would satisfy the requirements of the standard and ensure that the facility is designed, constructed, and operated to preclude structural failure of the tower or blades that could endanger public safety, and the conditions ensure that safety devices and testing procedures warn of impending turbine failure and minimize consequences of such failure.

Based upon the analysis presented here, and in compliance with existing site certificate conditions, the Department recommends that the Council find that the certificate holder can design, construct, and operate the facility, with proposed changes, in compliance with the Public Health and Safety Standards for Wind Energy Facilities.

### **Conclusions of Law**

Based on the foregoing analysis, and subject to compliance with the site certificate conditions, the Department recommends the Council find that the facility, with proposed construction deadline extensions, continues to comply with the Council’s Public Health and Safety Standards for Wind Energy Facilities.

#### **III.P.2. 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.*

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<sup>136</sup> SRWAMD4. Draft Proposed Order Public Comment Gilbert. 2019-02-22. On the record of the draft proposed order, Ms. Gilbert argues that Council’s previous approval of a variance to a WCLUDO setback requirement fails to comply with the Council’s Public Health and Safety Standards for Wind Facilities Standard (OAR 345-024-0010). Gilbert further argues that the certificate holder failed to address the hazards associated with ice throw. The Department presents additional findings in the proposed order to address this comment.

**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.

The Council previously approve aboveground and underground 34.5 kV collector lines as well as approximately 8 miles of an aboveground 239 kV transmission line;<sup>137</sup> RFA4 does not propose changes to the previously transmission line segments

The Department recommends that Council find that RFA4 would not result in a significant adverse impact under OAR 345-024-0090(1) and (2); the Department recommends that the Council incorporate the reasoning and analysis presented in previous final orders for the facility. The Council addressed the Siting Standards for Transmission Lines in section IV.M of the Final Order on the ASC and found the facility to be in compliance with the standard.

*Electric Fields*

In the Final Order on the ASC, the Council found that the certificate holder could construct and operate the transmission lines so that alternating current electric fields would be approximately 0.5 kV per meter at one meter above ground for the collector lines, and approximately 3.5 kV per meter at one meter above ground for the 230 kV transmission line. Both anticipated electric fields are significantly less than the threshold 9 kV per meter.

*Induced Current*

In the Final Order on the ASC, the Council found that the facility would comply with subsection (2) of the standard because conditions the certificate must provide appropriate grounding of fences and metal-roofed buildings in order to reduce the risk of induced current through Condition 7.10.

The certificate holder must also meet with the Oregon Public Utility Commission Safety, Reliability, and Security Division, prior to construction, to discuss compliance with OPUC

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<sup>137</sup> *Final Order on the ASC* (2011-08-19), p. 131



Chapter 860 regulations (Conditions 7.12 and 7.13). Because the certificate holder must comply with OPUC safety standards, which include reference to the National Electric Safety Code (NESC) standards, the Department proposes to administratively remove Condition 6.6; this condition requires the certificate holder to conform to NESC standards within the 2012 Edition of its code. The language from Condition 6.6 directly emanates from site-specific conditions contained at Oregon Administrative Rule 345-025-0010(4); however, the Department acknowledges that the rule language is outdated because the most current version of the NESC standards was published in 2017. Additionally, OAR 345-025-0010 states that “The Council *may* include the following conditions, as appropriate, in the site certificate...” (emphasis added). As such, this is not a mandatory condition, and there is no reason to require the certificate holder to demonstrate compliance with an outdated 2012 NESC standard as well as the 2017 NESC standard. In the draft proposed order and proposed order, given that the certificate holder must comply with OPUC safety codes that incorporate the NESC standards, the Department recommend~~ed~~ the removal of Condition 6.6 below:

**Recommended Deleted Condition 6.6:** ~~[DELETED] The certificate holder must design, construct and operate the transmission line in accordance with the requirements of the 2012 Edition of the National Electrical Safety Code approved on June 3, 2011. [AMD2; AMD4] [Mandatory Condition OAR 345-025-0006 (4)(a)]~~

## Conclusions of Law

For the reasons discussed above, and subject to compliance with the existing site certificate conditions, the Department recommends that the Council find that the facility, with proposed changes, would not result in a significant adverse impact under OAR 345-024-0090 that was not addressed in a previous Council order and would continue to comply with the Council’s Siting Standards for Transmission Lines.

### III.P.3. Cumulative Effects Standard for Wind Energy Facilities OAR 345-024-0015

*To issue a site certificate for a proposed wind energy facility, the Council must find that the applicant can design and construct the facility to reduce cumulative adverse environmental effects in the vicinity by practicable measures including, but not limited to, the following:*

- (1) Using existing roads to provide access to the facility site, or if new roads are needed, minimizing the amount of land used for new roads and locating them to reduce adverse environmental impacts.*
- (2) Using underground transmission lines and combining transmission routes.*
- (3) Connecting the facility to existing substations, or if new substations are needed, minimizing the number of new substations.*
- (4) Designing the facility to reduce the risk of injury to raptors or other vulnerable wildlife in areas near turbines or electrical equipment.*
- (5) Designing the components of the facility to minimize adverse visual features.*

1       (6) *Using the minimum lighting necessary for safety and security purposes and using*  
2       *techniques to prevent casting glare from the site, except as otherwise required by the*  
3       *Federal Aviation Administration or the Oregon Department of Aviation.*

4  
5       **Findings of Fact**

6  
7       For amendments requesting to extend construction deadlines, the Department and Council  
8       evaluate whether there have been “changes in fact or law” since the site certificate or amended  
9       site certificate was issued to determine whether, based on changes in fact or law, the facility  
10      would continue to satisfy requirements of the standard. The certificate holder reviewed  
11      changes to facts or law that would affect the certificate holder’s ability to comply with the  
12      cumulative effects standard; there are no changes in law or fact that would affect the  
13      cumulative effects standard.

14  
15     This standard requires the use of practicable measures to reduce the “cumulative adverse  
16     environmental effects” compared to possible wind energy facility effects in the absence of  
17     those measures. The standard is limited to environmental effects that are capable of being  
18     reduced and does not require the Council to find that a wind energy facility would have no  
19     cumulative environmental impacts.

20  
21     The Council previously reviewed impacts to (1) roads; (2) transmission lines and substations; (3)  
22     wildlife protection; (4) visual features; and (5) lighting. The Council found that the facility, with  
23     conditions, would comply with the standard. The certificate holder is required to use existing  
24     county roads to gain access to the site boundary; the collector transmission lines and the  
25     substation are required to utilize underground line systems where possible;<sup>138</sup> all transmission  
26     line support structures must follow the most current suggested practices for avian protection  
27     on power lines as published by the Avian Power Line Interaction Committee;<sup>139</sup> turbines must  
28     be coated in a neutral gray, white, or off-white tones to blend in with the surrounding  
29     landscape; turbines are required to maintain minimum light required by the FAA and the  
30     substation as well as O&M facilities are required to maintain lighting that is shielded or directed  
31     downward.<sup>140</sup>

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<sup>138</sup> The 34.5 kV collector lines will be constructed underground to the extent possible; however, up to 10% of the collector lines may be placed aboveground due to site specific geotechnical or environmental considerations. See Site Certificate on Amendment 3, p. 5

<sup>139</sup> Site Certificate Condition 10.8

<sup>140</sup> *Final Order on the ASC* (2011-08-19), p. 128-129

There are no changes to facility design; as such, the Department recommends that the Council find that the pre-existing conditions are sufficient to demonstrate continued compliance with the cumulative effects standard for wind energy facilities.

### **Conclusions of Law**

For the reasons discussed above, and subject to compliance with the existing site certificate conditions, the Department recommends that the Council find that the facility, with proposed construction deadline extensions, would not result in a significant adverse impact under OAR 345-024-0015 that was not addressed in a previous Council order and would continue to comply with the Council's Cumulative Effects Standard for Wind Energy Facilities.

### **III.Q. Other Applicable Regulatory Requirements Under Council Jurisdiction**

Under ORS 469.503(3) and under the Council's General Standard of Review (OAR 345-022-0000), the Council must determine whether the proposed facility complies with "all other Oregon statutes and administrative rules...as applicable to the issuance of a site certificate for the proposed facility." This section addresses the applicable Oregon statutes and administrative rules that are not otherwise addressed in Council standards, including noise control regulations, regulations for removal or fill of material affecting waters of the state, and regulations for appropriating water.

#### **III.Q.1. Noise Control Regulations: OAR 340-035-0035**

##### ***(1) Standards and Regulations:***

***\*\*\****

##### ***(b) New Noise Sources:***

##### ***(B) New Sources Located on Previously Unused Site:***

***(i) No person owning or controlling a new industrial or commercial noise source located on a previously unused industrial or commercial site shall cause or permit the operation of that noise source if the noise levels generated or indirectly caused by that noise source increase the ambient statistical noise levels, L10 or L50, by more than 10 dBA in any one hour, or exceed the levels specified in Table 8, as measured at an appropriate measurement point, as specified in subsection (3)(b) of this rule, except as specified in subparagraph (1)(b)(B)(iii).***

***(ii) The ambient statistical noise level of a new industrial or commercial noise source on a previously unused industrial or commercial site shall include all noises generated or indirectly caused by or attributable to that source including all of its related activities. Sources exempted from the requirements of section (1) of this rule, which are identified in subsections (5)(b) - (f), (j), and (k) of this rule, shall not be excluded from this ambient measurement.***

***(iii) For noise levels generated or caused by a wind energy facility:***

- (I) *The increase in ambient statistical noise levels is based on an assumed background L50 ambient noise level of 26 dBA or the actual ambient background level. The person owning the wind energy facility may conduct measurements to determine the actual ambient L10 and L50 background level.*
- (II) *The "actual ambient background level" is the measured noise level at the appropriate measurement point as specified in subsection (3)(b) of this rule using generally accepted noise engineering measurement practices. Background noise measurements shall be obtained at the appropriate measurement point, synchronized with windspeed measurements of hub height conditions at the nearest wind turbine location. "Actual ambient background level" does not include noise generated or caused by the wind energy facility.*
- (III) *The noise levels from a wind energy facility may increase the ambient statistical noise levels L10 and L50 by more than 10 dBA (but not above the limits specified in Table 8), if the person who owns the noise sensitive property executes a legally effective easement or real covenant that benefits the property on which the wind energy facility is located. The easement or covenant must authorize the wind energy facility to increase the ambient statistical noise levels, L10 or L50 on the sensitive property by more than 10 dBA at the appropriate measurement point.*
- (IV) *For purposes of determining whether a proposed wind energy facility would satisfy the ambient noise standard where a landowner has not waived the standard, noise levels at the appropriate measurement point are predicted assuming that all of the proposed wind facility's turbines are operating between cut-in speed and the wind speed corresponding to the maximum sound power level established by IEC 61400-11 (version 2002-12). These predictions must be compared to the highest of either the assumed ambient noise level of 26 dBA or to the actual ambient background L10 and L50 noise level, if measured. The facility complies with the noise ambient background standard if this comparison shows that the increase in noise is not more than 10 dBA over this entire range of wind speeds.*
- (V) *For purposes of determining whether an operating wind energy facility complies with the ambient noise standard where a landowner has not waived the standard, noise levels at the appropriate measurement point are measured when the facility's nearest wind turbine is operating over the entire range of wind speeds between cut-in speed and the windspeed corresponding to the maximum sound power level and no turbine that could contribute to the noise level is disabled. The facility complies with the noise ambient background standard if the increase in noise over 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.

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### **Findings of Fact**

The Noise Control Regulation at OAR 340-035-0035 have been adopted by Council as the compliance requirements for EFSC-jurisdiction energy facilities. For amendments requesting to extend construction deadlines, the Department and Council evaluate whether there have been "changes in fact or law" since the site certificate or amended site certificate was issued to determine whether, based on changes in fact or law, the facility would continue to satisfy requirements of the administrative rule. To evaluate potential changes in fact within the analysis area since the previous evaluation, the certificate holder conducted a detailed review of aerial imagery to confirm presence of noise sensitive properties.<sup>141</sup> Based on this evaluation, as presented on RFA4 Figure 10, the certificate holder identified four new noise sensitive properties that could be affected by the facility, not previously evaluated by EFSC in the original site certificate application or amendments.

Because the certificate holder identified new noise sensitive properties, the Department presents an evaluation of maximum noise impacts during facility operation, as evaluated in the

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<sup>141</sup> "Noise Sensitive Property" means real property normally used for sleeping, or normally used as schools, churches, hospitals or public libraries. Property used in industrial or agricultural activities is not Noise Sensitive Property unless it meets the above criteria in more than an incidental manner. OAR 340-035-0015(38).

Council’s *Final Order on the ASC*, and assesses whether based on the location of the new noise sensitive properties, the facility would continue to comply with the noise standards under the Noise Control Regulation.<sup>142</sup> The certificate holder relies on, and historically relied on, it’s original ASC Exhibit X; those estimates are considered to include the most conservative assumptions that could arise from the facility.

### *Noise Standards*

Noise generated by a wind energy facility located on a previously unused site must comply with two tests: the “ambient noise degradation test” and the “maximum allowable noise test.”<sup>143</sup> Under the ambient noise degradation test, facility-generated noise must not increase the ambient hourly L10 or L50 noise levels at any noise sensitive property by more than 10 dBA when wind turbines are operating “between cut-in speed and the wind speed corresponding to the maximum sound power level.” To show that a facility complies with this test, the certificate holder may use an assumed ambient hourly L50 noise level of 26 dBA or measure the actual ambient hourly noise levels at the receiver in accordance with the procedures specified in the regulation. Based on the certificate holder’s initial 2009 acoustic noise analysis, an assumed 26 dBA was utilized for the ambient hourly L50 noise level.

To demonstrate compliance with the ambient noise degradation test, the noise generated during facility operation must not cause the hourly L<sub>50</sub> noise level at any noise-sensitive property to exceed 36 dBA. However, OAR 340-035-0035(1)(b)(B)(iii)(III) relieves the certificate holder from having to show compliance with the ambient noise degradation test “if the person who owns the noise sensitive property executes a legally effective easement or real covenant that benefits the property on which the wind energy facility is located” (a “noise waiver”). Under the maximum allowable noise test at OAR 340-035-0035(1)(b)(B)(i) a wind energy facility may not exceed the noise levels specified in Table 8 of the noise rules, as represented in Table 2, *Statistical Noise Limits for Industrial and Commercial Noise Sources* below. Pursuant to OAR 340-035-0035(1)(b)(B)(iii)(III), it is not possible for a property owner to waive an exceedance under the maximum allowable noise test.

<sup>142</sup> The noise analysis on the record for this facility, including ASC and three subsequent amendment proceedings, relies upon the initial acoustic modeling from ASC Exhibit X.

<sup>143</sup> OAR 340-035-0035(5)(g) specifically exempts noise caused by construction activities. In RFA4, the certificate holder affirms that construction of the facility would not result in changes to previously evaluated construction activities. Council previously imposed Condition 12.1 requiring that, during construction, heavy equipment operation be restricted to daylight hours; combustion engine-powered equipment be equipped with exhaust mufflers; 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.

1

**Table 5: Statistical Noise Limits for Industrial and Commercial Noise Sources**

<b>Statistical Descriptor<sup>1</sup></b>	<b>Maximum Permissible Hourly Statistical Noise Levels (dBA)</b>	
	<b>Daytime (7:00 AM - 10:00 PM)</b>	<b>Nighttime (10:00 PM - 7:00 AM)</b>
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		

2

3 *Potential Noise Impacts*

4

5 Potential noise impacts from construction and operation of the facility within the analysis area,  
 6 as evaluated in the Council's *Final Order on the ASC*, are presented below to support the  
 7 evaluation of impacts to the four new noise sensitive properties identified in RFA4 which have  
 8 not been previously evaluated by EFSC.

9

10 The certificate holder conducted an acoustic noise modeling analysis during the ASC phase. For  
 11 its initial analysis, the certificate holder evaluated two layouts – 66 wind turbines, rated at 2.3  
 12 MW with a maximum sound power level of 107 dBA; and, 87 wind turbines, rated at 1.8 MW  
 13 with a maximum sound power level of 109 dBA. The maximum sound power levels included a  
 14 factor of 2 dBA to account for uncertainty. The certificate holder used the Computer Aided  
 15 Noise Abatement (CadnaA), version 3.72, 2009 software program to make the predictions of  
 16 peak noise levels at noise sensitive properties within the analysis area. The program includes  
 17 sound propagation factors adopted from International Organization for Standardization's (ISO)  
 18 9613 "Attenuation of Sound during Propagation Outdoors" to account for distance, atmosphere  
 19 and ground attenuation. Based on the location of four new noise sensitive properties not  
 20 previously evaluated, and review of ASC Exhibit X, two of four would experience noise levels in  
 21 excess of the 10 dBA ambient degradation threshold and one could potentially experience noise  
 22 levels greater than 50 dBA, the maximum allowable noise level.<sup>144</sup>

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<sup>144</sup>SRWAMD4Doc17 Request for Amendment 4 2019-01-16, Section 5.3.1



Council previously imposed Conditions 12.2, 12.3, and 12.4 related to operational noise. Condition 12.2 requires the certificate holder to provide to the Department, prior to construction and based on final facility design, an acoustic noise analysis based on final facility design that demonstrates compliance with the maximum allowable noise level and ambient degradation threshold or, in the alternative, noise waivers for the noise sensitive property locations where the ambient degradation threshold is not satisfied. Condition 12.3 requires the certificate holder to maintain a noise complaint response system; and it likewise must report any noise complaints and the certificate holder's response to the Department within 15-days of receipt. Condition 12.4 provides the Department the authority to require recording and monitoring of actual statistical noise levels in accordance with a Department-approved monitoring plan, to demonstrate compliance with the Noise Control Regulation.

As mentioned above, the certificate holder identified 2 new noise sensitive properties that, based on their location, in relation to ASC Exhibit X Figure X-1, could experience noise levels in excess of the 10 dBA ambient degradation threshold. One noise sensitive property could experience noise levels near or above 50 dBA, the maximum allowable noise level at noise sensitive properties. The certificate holder can demonstrate compliance with the ambient degradation standard (more than 10 dBA above baseline) by securing and submitting to the Department a noise waiver from the property owner. This is reflected in existing Condition 12.2. However, the certificate holder cannot comply with the noise regulations by securing a noise waiver from the 50 dBA maximum allowable sound level. In the draft proposed order and proposed order, based on potential noise impacts at noise sensitive properties, and to confirm compliance with the Noise Control Regulation, the Department recommends ~~see~~ that the Council amend Condition 12.4 as follows:

**Recommended Amended Condition 12.4:** During operations, the certificate holder shall:

- a. Upon written notification from the Department, ~~the certificate holder will~~ monitor and record the actual statistical noise levels ~~during operations~~ to verify that ~~the certificate holder is operating the facility~~ is 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, will be borne by the certificate holder.
- b. If the results of the pre-construction final noise analysis submitted per Condition 12.2 identify that modeled noise levels are predicted to be within 1 dBA of the ambient degradation threshold (10 dBA) for noise sensitive properties that have not agreed to a noise waiver with the certificate holder, or within 1 dBA of the maximum allowable noise level (50 dBA) for any noise sensitive property, the certificate holder shall monitor and record actual statistical noise levels during Year 1 of operations to verify that the certificate holder is operating the facility in compliance with the noise control regulations. The monitoring plan must be reviewed and approved by the Department prior to implementation.
- c. If the ambient degradation threshold (10 dBA) at noise sensitive properties that have not agreed to a noise waiver with the certificate holder, or maximum allowable noise

level (50 dBA) at any noise sensitive property is measured at any noise sensitive property during monitoring conducted to satisfy (a) or (b) of this condition, the certificate holder shall submit to the Department its mitigation proposal demonstrating the measures to be utilized to lower noise levels and achieve compliance with the applicable noise standard. The mitigation proposal shall be reviewed and approved by the Department.

[Final Order VI.A.2.4; AMD4]

### **Conclusions of Law**

Based on the foregoing recommended findings of fact and conclusions of law, and subject to compliance with existing and recommended amended site certificate conditions, the Department recommends that the Council find that the facility would continue to comply with the Noise Control Regulations in OAR 340-035-0035.

### **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>145</sup> or if any removal or fill activities occur in streams designated as Essential Indigenous Anadromous Salmonid Habitat. The Council, in consultation with DSL, must determine whether a removal-fill permit is needed and if so, whether a removal-fill permit should be issued. The analysis area for wetlands and other waters of the state is the area within the site boundary.

### **Findings of Fact**

The Council addressed the removal-fill law in Section VI.B.1 of the *Final Order on the ASC* and found that the facility does not require a removal-fill permit.

The certificate holder conducted field surveys in 2009 and reviewed relevant literature to determine whether wetlands exist within the study area, which included review of 1,300 foot turbine micrositing corridors, transmission line corridor, and the areas associated with potential

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<sup>145</sup> ORS 196.800(15) defines “Waters of this state.” The term includes wetlands and certain other waterbodies.

1 substation locations, laydown areas, and the O&M facility. Surveys delineated six wetlands  
2 within the study area; the Department of State Lands (DSL) stated that five of the six wetlands  
3 are subject to the State Removal / Fill laws.<sup>146</sup> The DSL concurred with the certificate holder's  
4 wetland delineation study, most recently on May 26, 2016.

5  
6 The Council found in the *Final Order on the ASC* that none of the wetlands would be impacted  
7 by the construction or operation of the facility.<sup>147</sup> The *Final Order on the ASC* noted that the  
8 majority of wetlands are located along the transmission corridor; since the transmission line  
9 towers are proposed to be located 800 to 1,000 feet apart, the certificate holder would have  
10 flexibility to avoid wetlands. The Council imposed Condition 6.34, which requires the certificate  
11 holder to ensure that facility components are sited to avoid direct impacts to wetlands and  
12 waterways. Furthermore, Condition 6.9 restricts the removal or fill of more than 50 cubic yards  
13 of material in any waters of the state.

14  
15 RFA 4 does not request any change to the facility layout or site boundary, and does not  
16 otherwise propose any activities that would require a Removal / Fill permit. Based on the  
17 imposition of the above described conditions, the Department recommends the Council find  
18 that the facility, with the requested extension of the construction deadlines, maintains  
19 compliance with the removal-fill law and the certificate holder is not currently required to  
20 obtain a removal-fill permit.

## 21 **Conclusions of Law**

22  
23  
24 Based on the foregoing findings of fact and conclusions, the Department recommends that the  
25 Council find that a removal-fill permit is not needed for the facility with proposed changes.

## 26 **III.Q.3. Water Rights**

27  
28  
29 Under ORS Chapters 537 and 540 and OAR Chapter 690, OWRD administers water rights for  
30 appropriation and use of the water resources of the state. Under OAR 345-022-0000(1), the  
31 Council must determine whether the proposed facility would comply with these statutes and  
32 administrative rules.

---

<sup>146</sup> SRWAMD2Doc3 Agency Comment DSL (A. Downing)\_2016-05-31.pdf

<sup>147</sup> *Final Order on the ASC* (2011-08-19), p. 158

## **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 or ground water, to construct a reservoir and store water, to use reserved water, or to use water stored in a reservoir. The certificate holder does not request a groundwater permit, a surface water permit, or a water rights transfer during the construction or operation of the proposed facility.

The Council previously found in the *Final Order on the ASC* that the facility would comply with the Ground Water Act of 1955 and Water Resources Department administrative rules. The facility would use up to 15 million gallons total during construction, and fewer than 5,000 gallons per day during operations.<sup>148</sup> Construction-related water use is necessary for dust control purposes, road compaction, and concrete preparation. In ASC Exhibit O, the certificate holder provided a letter from The City of The Dalles, in which the city indicated that it was able and willing to meet the construction water needs of the facility.

Site certificate Condition 10.9 allows the certificate holder to withdraw no more than 5,000 gallons of water per day, from an on-site well, for operations.<sup>149</sup> Condition 10.10 requires the certificate holder to ensure that there is no runoff of wash water from equipment washing. Furthermore, the certificate holder may not use acids, bases, or metal brighteners with wash water.

<sup>149</sup> In the draft proposed order, the Department recommended Condition 10.9 be amended as follows, “During facility operation, the certificate holder shall obtain water for on-site uses from an on-site well located near the O&M building. The certificate holder shall construct the on-site well 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~~ 15,000 gallons of water per day from the onsite well for domestic purposes, or 5,000 gallons per day for industrial or commercial purposes. The certificate holder may use other sources of water for on-site uses subject to prior approval by the Department.” [Final Order VI.C.2.1; AMD4].

SRWAMD4. Draft Proposed Order Public Comment Gilbert. 2019-02-22. On the record of the draft proposed order, Ms. Gilbert argues that the Department’s recommended amended Condition 10.9 is not consistent with ORS 469.310 (Policy) or the Council’s General Standard of Review (OAR 345-022-0000), Land Use (OAR 345-022-0030), and Fish and Wildlife Habitat (OAR 345-022-0060) standards. Gilbert argues that the Department’s recommended amended Condition 10.9, which would increase the allowable daily water use limit of the O&M building well from 5,000 to 15,000 gallons per day, is an incorrect application of the definitions of “domestic” and “industrial.” She claims that while ORS 537.545(1)(d) establishes permit exemption for wells withdrawing up to 15,000 gallons per day for domestic purposes, that based on the dictionary definition, domestic water use can only apply to personal residential purposes and cannot apply to the facility’s O&M building. The Department agrees and in the proposed order removed the recommended amended condition language.

1  
2 The certificate holder does not request any changes to the facility layout, design, or site  
3 boundary, nor does the certificate holder request a water permit. As such, the facility, with the  
4 requested extension of the construction deadlines, would maintain compliance with the  
5 Ground Water Act of 1955 or Water Resources Department rules.

6  
7 **Conclusions of Law**

8  
9 Based on the foregoing findings of fact, the Department recommends that the Council conclude  
10 that the facility, with the requested extension of the construction deadlines, does not require a  
11 groundwater permit, surface water permit, or water right transfer.  
12

**IV. PROPOSED CONCLUSIONS AND ORDER**

Based on the recommended findings and conclusions included in this order, the Department recommends that Council make the following findings:

1. The facility, with proposed construction deadline extensions, included in Request for Amendment 4 of the Summit Ridge Wind Farm site certificate complies with the requirements of the Oregon Energy Facility Siting Statutes, ORS 469.300 to 469.520.
2. The facility, with proposed construction deadline extensions, included in Request for Amendment 4 of the Summit Ridge Wind Farm site certificate complies with the standards adopted by the Council pursuant to ORS 469.501.
3. The facility, with proposed changes, included in Request for Amendment 4 of the Summit Ridge Wind Farm 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 Department recommends that the Council find that the facility, with proposed construction deadline extensions, included in Request for Amendment 4 of the Summit Ridge Wind Farm site certificate complies with the General Standard of Review (OAR 345-022-0000). The Department recommends that the Council find, based on a preponderance of the evidence on the record, that the site certificate may be amended as requested.

**Amended Proposed Order**

The Department recommends that the Council approve Amendment 4 of the Summit Ridge Wind Project site certificate.

**Issued this 3rd day of July, 2019**

**The OREGON DEPARTMENT OF ENERGY**



**By: \_\_\_\_\_**

**Todd R. Cornett, Assistant Director**

**Oregon Department of Energy, Energy Facility Siting Division**

- Attachment A: Draft Amended Site Certificate (Red-line version)
- Attachment B: Reviewing Agency Comments on preliminary RFA4
- Attachment C: Draft Proposed Order Comment Index
- Attachment D: Draft Habitat Mitigation Plan
- Attachment E: Revegetation and Weed Control Plan
- Attachment F: Wildlife Monitoring and Mitigation Plan
- Attachment G: Threatened and Endangered Plant Species and Raptor Nest Survey Protocol
- Attachment H: State Sensitive Species Observed or with Potential to Occur in Analysis Area
- Attachment I: ODFW Comment on Amended Proposed Order



**Notice of the Right to Appeal**

[Text to be added to Final Order]

**Attachment A: Draft Amended Site Certificate (Red-line version)**

**~~THIRD~~ FOURTH -AMENDED SITE CERTIFICATE**

**FOR THE**

**SUMMIT RIDGE WIND FARM**

Issued ~~December 2017~~ MONTH 2019

by

OREGON ENERGY FACILITY SITING COUNCIL  
550 Capitol Street NE  
Salem, OR 97301-2567

*PHONE: 503-378-4040*

*FAX: 503-373-7806*

~~Amending the~~  
~~Site Certificate for the Summit Ridge Wind Farm~~ ISSUANCE DATES

<u>Site Certificate</u>	<u>August 19, 2011</u>
<u>First Amended Site Certificate</u>	<u>August 7, 2015</u>
<u>Second Amended Site Certificate</u>	<u>November 4, 2016</u>
<u>Third Amended Site Certificate</u>	<u>January 8, 2018</u>
<u>Fourth Amended Site Certificate</u>	<u>DATE</u>

# SUMMIT RIDGE WIND FARM SITE CERTIFICATE

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## **Acronyms and Abbreviations**

Council	Oregon Energy Facility Siting Council
Department	Oregon Department of Energy
DOGAMI	Oregon Department of Geology and Mineral Industries
DPO	Draft Proposed Order
ESCP	Erosion and Sediment Control Plan
FAA	Federal Aviation Administration
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
WCLUDO	Wasco County Land Use and Development Ordinance

## 1.0. INTRODUCTION

The Oregon Energy Facility Siting Council (Council) issues this site certificate for the Summit Ridge Wind Farm (Summit Ridge or the facility) in the manner authorized under Oregon Revised Statute (ORS) Chapter 469. This site certificate is a binding agreement between the State of Oregon (State), acting through the Council, and Summit Ridge Wind, LLC (certificate holder), which is a wholly owned subsidiary of Pattern Renewables 2 LP (Pattern Development or parent company), a subsidiary of Pattern Energy Group 2 LP (Pattern Energy or PEG2LP), the sole limited partner of Pattern Development. The Council issues this site certificate authorizing the certificate holder to construct, operate, and retire the facility in Wasco County, subject to the conditions set forth herein.

The findings of fact, reasoning, and conclusions of law underlying the terms and conditions of this site certificate are set forth in the Council's *Final Order in the Matter of the Application for a Site Certificate for the Summit Ridge Wind Farm* (Final Order on ASC) issued on August 19, 2011, the Council's *Amended Final Order in the Matter of the Request for Amendment #1* (Amended Final Order on Amendment 1) issued on August 7, 2015, the Council's *Final Order on the Request for Contested Case, Amendment #2 and Request for Transfer of the Site Certificate* (Final Order on Amendment 2) issued on November 4, 2016, ~~and~~ the Council's *Final Order on Request for Transfer* (Final Order on Amendment 3) issued on December 15, 2017, and the Council's Final Order on Request for Amendment 4 (Final Order on Amendment 4), and incorporated herein by this reference. In interpreting this site certificate, any ambiguity will be clarified by reference to and the record of the proceedings that led to the following, in order of priority: (1) this Amended Site Certificate, (2) Final Order on Amendment 4; (32) Final Order on Amendment 3, (43) the Final Order on Amendment 2, (54) the Amended Final Order on Amendment 1, and (65) the Final Order on ASC.

This amended site certificate does not address, and is not binding with respect to, matters that were not addressed in the Council's Final Order on ASC, Amended Final Order on Amendment 1, Final Order on Amendment 2, ~~and~~ Final Order on Amendment 3, and Final Order on Amendment 4. Such matters include, but are not limited to: building code compliance; wage; hour; and 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 obligation of the certificate holder to report information to the Oregon Department of Energy (Department) or the Council under the conditions listed in this amended 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.

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

5  
6 The definitions in ORS 469.300 and OAR 345-001-0010 apply to terms used in this site  
7 certificate, except where otherwise stated, or where the context clearly indicates otherwise.  
8

## 9 **2.0. SITE CERTIFICATION**

10  
11 2.1. To the extent authorized by state law and subject to the conditions set forth herein, the  
12 State authorizes the certificate holder to construct, operate, and retire a wind energy  
13 facility, together with certain related or supporting facilities, at the site in Wasco  
14 County, Oregon, as described in Section 3.0 of this site certificate.  
15 [ORS 469.401(1)]  
16

17 2.2. This site certificate is effective until 1) it is terminated under OAR 345-027-0110 or the  
18 rules in effect on the date that termination is sought; or 2) until the site certificate is  
19 revoked under ORS 469.440 and OAR 345-029-0100 or the statutes and rules in effect  
20 on the date that revocation is ordered.  
21 [ORS 469.401(1)]  
22

23 2.3. Both the State and the certificate holder shall abide by local ordinances, state law, and  
24 the rules of the Council in effect on the date this site certificate is executed. ORS  
25 469.401(2). In addition, upon a clear showing of a significant threat to public health,  
26 safety, or the environment that requires application of later-adopted laws or rules, the  
27 Council may require compliance with such later-adopted laws or rules.  
28 [ORS 469.401(2)]  
29

30 2.4. For a permit, license, or other approval addressed in and governed by this site  
31 certificate, the certificate holder shall comply with applicable state and federal laws  
32 adopted in the future to the extent that such compliance is required under the respective  
33 state agency statutes and rules.  
34 [ORS 469.401(2)]  
35

36 2.5. Subject to the conditions herein, this site certificate binds the State and all counties,  
37 cities, and political subdivisions in Oregon as to the approval of the site and the  
38 construction, operation, and retirement of the facility as to matters that are addressed in  
39 and governed by this site certificate.  
40 [ORS 469.401(3)]  
41  
42  
43  
44  
45  
46



- 1 2.6. Each affected state agency, county, city, and political subdivision in Oregon with  
2 authority to issue a permit, license, or other approval addressed in or governed by this  
3 site certificate shall, upon submission of the proper application and payment of the  
4 proper fees, but without hearings or other proceedings, issue such permit, license, or  
5 other approval subject only to conditions set forth in this site certificate.  
6 [ORS 469.401(3)]  
7
- 8 2.7. After issuance of this site certificate, each state agency or local government agency that  
9 issues a permit, license, or other approval for the facility shall continue to exercise  
10 enforcement authority over such permit, license, or other approval.  
11 [ORS 469.401(3)]  
12
- 13 2.8. After issuance of this site certificate, the Council shall have continuing authority over  
14 the site and may inspect, or direct the Oregon Department of Energy (Department) to  
15 inspect, or request another state agency or local government to inspect, the site at any  
16 time in order to ensure that the facility is being operated consistently with the terms and  
17 conditions of this site certificate.  
18 [ORS 469.430]  
19
- 20 2.9. ~~[DELETED] The certificate holder shall request an amendment of the site certificate to~~  
21 ~~increase the combined peak generating capacity of the facility beyond 194.4 megawatts,~~  
22 ~~to increase the number of wind turbines to more than 72 wind turbines or to install wind~~  
23 ~~turbines with a hub height greater than 91 meters, a blade tip height greater than 152~~  
24 ~~meters or a blade tip clearance less than 18 meters above ground.~~  
25 [Final Order III.D.7; AMD2; AMD4Final Order on Amendment 2] [Mandatory  
26 Condition OAR 345-025-0006 (3)]  
27
- 28 2.10. Before any transfer of ownership of the facility or ownership of the site certificate  
29 holder, the certificate holder shall inform the Department of the proposed new owners.  
30 The requirements of OAR 345-027-0100 apply to any transfer of ownership that  
31 requires a transfer of the site certificate.  
32 [Final Order IV.B.2.8] [Mandatory Condition OAR 345-025-0006 (15)]  
33
- 34 2.11. Any matter of non-compliance under the site certificate shall be the responsibility of the  
35 certificate holder. Any notice of violation issued under the site certificate shall be issued  
36 to the certificate holder. Any civil penalties assessed under the site certificate shall be  
37 levied on the certificate holder.  
38 [Final Order IV.B.2.5]  
39
- 40 2.12. Within 72 hours after discovery of conditions or circumstances that may violate the  
41 terms or conditions of the site certificate, the certificate holder shall report the  
42 conditions or circumstances to the Department.  
43 [Final Order IV.B.2.7]  
44  
45  
46

1 2.13. The Council shall not change the conditions of this site certificate except as provided  
2 for in OAR Chapter 345, Division 27.

3 [Final Order VII.1] [Mandatory Condition OAR 345-025-0006 (1)]  
4

5 2.14. Following the completion of surveys required by this site certificate, the Department  
6 will present the results of those surveys and required consultations at the next regularly  
7 scheduled Council meeting.

8 [Added at the August 7, 2015 Energy Facility Siting Council Meeting]  
9

### 3.0 DESCRIPTION OF FACILITY

#### LOCATION AND SITE BOUNDARY

Summit Ridge is located in Wasco County, Oregon approximately 17 miles southeast of The Dalles, and eight miles east of Dufur, Oregon. ~~The facility site boundary encompasses approximately 11,000 acres on private land subject to long-term wind energy leases with the landowners.~~

As defined by OAR 345-001-0010, the “site boundary” is the perimeter of the site of the energy facility, its related or supporting facilities, all temporary laydown and staging areas and all corridors and micrositing corridors. The facility site boundary encompasses approximately 11,000 acres on private land subject to long-term wind energy leases with the landowners. The Summit Ridge turbines will be located within micrositing corridors approximately 1,300 feet wide. As clarification, the certificate holder may not construct facility components outside of previously surveyed areas (see Condition 10.7, 11.3); the certificate holder has demonstrated prior surveys that encompass a 400 foot wide corridor that includes proposed turbine locations, and a 1000 foot wide corridor that includes the proposed transmission line.

As defined in OAR 345-001-0010, a “micrositing corridor” means a continuous area of land within which construction of facility components may occur, subject to site certificate conditions.<sup>1</sup> 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. The approved micrositing corridor includes approximately 1,300-foot around locations of temporary and permanent disturbance. In order to utilize the approved micrositing corridor, the certificate holder is obligated to satisfy pre-construction survey requirements imposed in the site certificate (Conditions 10.7, 11.3).

#### THE ENERGY FACILITY

~~Summit Ridge has a combined peak generating capacity of 194.4 megawatts (MW).~~ The facility is approved to consists of up to 72 wind turbine generators.

Turbines will be mounted on tubular steel towers no greater than 91 meters (299 feet) tall at the turbine hub, with a maximum blade tip height no greater than 152 meters (499 feet) and a minimum blade tip clearance of no less than 18 meters (59 feet) above the ground. Turbines include a nacelle that houses the generator and gearbox, and supports the rotor and blades at the hub. A gravel turbine pad area would surround the base of each concrete turbine foundation. A step-up transformer increases the output voltage of each wind turbine generator to the voltage of the power collection system. The step-up transformer will be installed on its own concrete pad at the base of each wind turbine tower, or located in the nacelle, depending on the final turbine model selected.

Summit Ridge includes the following related or supporting facilities described below and in greater detail in the *Final Order on ASC*, and the *Final Order on Amendment 3*:

---

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

- Power collection system
- Collector substation
- 230-kV transmission line
- Supervisory Control and Data Acquisition (SCADA) System
- Operations and maintenance (O&M) facility
- Meteorological (met) towers
- Access roads
- Temporary roadway modifications
- Additional temporary construction areas (including laydown areas, crane paths, and a concrete batch plant)

## **POWER COLLECTION SYSTEM**

Power from each turbine will be transmitted via the approximately 49-mile collection line system to the collector substation. The new 34.5-kV collection lines will be constructed underground to the extent possible, although up to 10% of the collector lines may be placed aboveground due to site-specific geotechnical or environmental considerations. Aboveground segments would be supported by H-frame wood poles approximately 55 feet in height.

## **COLLECTOR SUBSTATION**

The 34.5 kV collector line system will link each turbine to the facility collector substation, which will step up the power from 34.5 kV to 230 kV. The centrally-located collector substation will occupy approximately five acres, surrounded by a graveled, fenced area.

## **230 KV TRANSMISSION LINE**

A new overhead 230 kV transmission feeder line approximately eight miles in length connects the facility's collector substation to the regional grid at a substation operated by the Bonneville Power Administration (BPA). The 230 kV transmission line runs northwest from the collector substation for approximately two miles, then almost due west for another six miles to the BPA substation, connecting with BPA's 500 kV "Big Eddy to Maupin-Redmond" transmission line.

The Summit Ridge transmission line will be supported on wooden H-frame poles that are 70 feet in height and spaced approximately 800 feet apart. The right-of-way for the transmission line is approximately 150 feet wide.

BPA will be responsible for the operation and maintenance of the interconnection facility. If the Summit Ridge facility ceases operation and a decommissioning/retirement plan is implemented, the transmission system operator is not obliged under this site certificate to dismantle the interconnection station, which will also be used to serve other customers.

## **SUPERVISORY CONTROL AND DATA ACQUISITION (SCADA) SYSTEM**

A SCADA system will be installed at the facility to enable remote operation and collect operating data for each wind turbine, and archive wind and performance data. The SCADA system will be linked via fiber optic cables or other means of communication to a central computer in the O&M building. SCADA system wires will be installed in the collector line underground trenches, or overhead as necessary with the collector line.

## **OPERATIONS AND MAINTENANCE (O&M) FACILITY**

One permanent O&M facility will be located within the five-acre facility collector substation site, and will include up to 10,000 square feet of enclosed space for office and workshop areas, a control room, and kitchen and sanitary facilities. The O&M facility will have an adjacent graveled parking area and an approximately 300-foot by 300-foot fenced storage area. The Facility will also include an on-site well and septic system. Domestic water needs for the O&M facility will be served by an on-site well and septic system.

## **METEOROLOGICAL TOWERS**

A maximum of three permanent un-guyed meteorological towers will be placed within the site boundary to collect wind resource data (these towers will replace seven existing temporary towers). The met towers will be the same height as the hub of the turbines, approximately 80 meters (263 feet) tall. Met tower foundations may be constructed as deep as 40 feet, depending on soil conditions and geotechnical engineering requirements.

## **ACCESS ROADS**

Approximately 19 miles of new roads will be constructed within the site boundary to provide access to the turbines and other facility components. Access roads will be designed to be 20-foot wide graveled surfaces with 10-foot compacted shoulders to accommodate construction cranes. After the completion of construction, all new roads within the site boundary will be restored to a total width of 20 feet for general use during facility operation.

## **TEMPORARY ROADWAY MODIFICATIONS**

Approximately six miles of existing private roads will be upgraded to accommodate construction and operation of the facility. Where needed, existing roads will be improved to 20-foot wide graveled surfaces with 10-foot compacted shoulders to accommodate construction equipment and cranes. After the completion of construction, improved roads within the site boundary will be restored to a total width of 20-feet for general use during facility operation.

## **ADDITIONAL CONSTRUCTION AREAS**

During construction, up to six temporary laydown areas will be used for the delivery and staging of wind turbine components and other equipment and materials, as well as the staging of construction trailers for the construction crews. Five of the six temporary laydown areas will be

1 located on approximately four acres, covered with gravel, which will be removed following  
2 completion of facility construction. The sixth temporary laydown area will encompass the  
3 permanent five-acre collector substation and O&M site. Concrete for construction of the facility  
4 would be obtained from an on-site concrete batch plant to be located on a graveled 2-acre site  
5 within the site boundary.  
6

#### 4.0. GENERAL ADMINISTRATIVE CONDITIONS

- 4.1. The certificate holder shall begin construction of the facility by August 19, ~~2018~~ 2020. The Council may grant an extension of the deadline to begin construction in accordance with OAR 345-027-~~0030~~ 0085 or any successor rule in effect at the time the request for extension is submitted.  
[Final Order on Amendment 2; AMD4] [Mandatory Condition OAR 345-025-0006 (4)]
- 4.2. The certificate holder shall complete construction of the facility by August 19, ~~2021~~ 2023. Construction is complete when: 1) the facility is substantially complete as defined by the certificate holder's construction contract documents, 2) acceptance testing has been satisfactorily completed; and 3) the energy facility is ready to begin continuous operation consistent with the site certificate. The certificate holder shall promptly notify the Department of the date of completion of construction. The Council may grant an extension of the deadline for completing construction in accordance with OAR ~~345-027-0030~~ 345-027-0085 or any successor rule in effect at the time the request for extension is submitted.  
[Final Order III.D.2; AMD2; AMD4~~Final Order on Amendment 2~~] [Mandatory Condition OAR 345-025-0006 (4)]
- 4.3. The certificate holder shall submit a legal description of the site to the 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 identifies the outer boundaries that contain all parts of the facility.  
[Final Order III.D.3] [Mandatory Condition OAR 345-025-0006 (2)]
- 4.4. The certificate holder shall design, construct, operate and retire the facility:  
a. Substantially as described in the site certificate;  
b. In compliance with the requirements of ORS Chapter 469, applicable Council rules, and applicable state and local laws, rules and ordinances in effect at the time the site certificate is issued; and  
c. In compliance with all applicable permit requirements of other state agencies.  
[Final Order III.D.4] [Mandatory Condition OAR 345-025-0006 (3)]
- 4.5. The certificate holder shall construct ~~the turbines- the 230 kV and~~ transmission line within a 1,300 foot ~~the~~ corridor ~~locations set forth in Exhibit C of the application for site certificate, as represented on Figure 1 of the site certificate,~~ subject to the conditions of this site certificate.  
[Final Order III.D.8; AMD4] [Mandatory Condition OAR 345-025-00~~06~~10(5)]
- 4.6. The certificate holder shall obtain all necessary federal, state, and local permits or approvals required for construction, operation, and retirement of the facility or ensure that its contractors obtain the necessary federal, state, and local permits or approvals.  
[Final Order IV.B.2.4]



## 5.0. PRE-CONSTRUCTION REQUIREMENTS

In addition to pre-construction requirements contained elsewhere in this site certificate, the certificate holder must meet the following requirements:

5.1. 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 change of major contractors.  
[Final Order IV.B.2.1]

5.2. 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.  
[Final Order IV.B.2.2]

5.3. Before beginning construction, the certificate holder shall ensure that participating landowners obtain a Farm-Forest Management Easement. The landowner is required to sign and record in the deed records for the county a document binding the landowner, and the landowner's successors in interest, prohibiting them from pursuing a claim for relief or case of action alleging injury from farming or forest practices for which no action or claim is allowed under ORS 30.936 or 30.937.  
[Final Order IV.D.2.4] [WCLUDO section 3.210(H)]

5.4. Before beginning construction, the certificate holder shall submit a Notice of Proposed Construction or Alteration to the Federal Aviation Administration (FAA) and the Oregon Department of Aviation identifying the proposed final locations of turbine towers and meteorological towers, and shall provide to the Department copies of a Determination of No Hazard for all turbine towers and meteorological towers or an equivalent determination to confirm that the structures comply with applicable FAA and Oregon Department of Aviation air hazard rules. The certificate holder shall promptly notify the Department of the responses from the FAA and Oregon Department of Aviation.  
[Amended Final Order on Amendment 1 IV.K.2.4]

- 5.5. Before beginning construction, the certificate holder shall provide to the Department a description of the turbine types selected for the facility demonstrating compliance with this condition. The certificate holder may select turbines of any type, subject to the following restrictions and compliance with all other site certificate conditions:
- a. The total number of turbines at the facility must not exceed 72 turbines.
  - ~~b. The combined peak generating capacity of the facility must not exceed 194.4 megawatts.~~
  - ~~eb.~~ The turbine hub height must not exceed 91 meters, ~~and~~ the maximum blade tip height must not exceed 152 meters, and the rotor diameter must not exceed 132 meters above grade.
  - ~~ce.~~ The minimum blade tip clearance must be 18 meters above ground.
- [Final Order on Amendment 2; AMD4] [Mandatory Condition OAR 345-025-0006 (3)]
- 5.6. Before beginning construction the certificate holder shall obtain approval of a final Revegetation and Weed Control Plan [based upon the draft plan included as Attachment E of the *Final Order on Amendment #24*] from the Department, in consultation with the Wasco County Weed Department and ODFW, to control the introduction and spread of noxious weeds, and shall implement that approved plan during all phases of construction and operation of the facility.
- [Final Order on ASC; Amendment #2AMD2; AMD4] [WCLUDO Section 3.210(J)(17)(5)]
- 5.7. Except as necessary for the initial survey or as otherwise allowed for wind energy facilities, transmission lines or pipelines under OAR 345-027-0020, 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:
- 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 the transmission line or pipeline occurs during the certificate holder’s negotiations to acquire construction rights on another part of the site; or
  - 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.
- [Final Order III.D.6] [Mandatory Condition OAR 345-025-0006 (5)]

1  
2 5.8. Before beginning construction, the certificate holder shall conduct a site-specific  
3 geotechnical investigation and shall report its findings to the Oregon Department of  
4 Geology & Mineral Industries (DOGAMI) and the Department. The report must be  
5 submitted to the Department and DOGAMI at least 90 days prior to beginning  
6 construction unless otherwise agreed upon by the Department. The certificate holder  
7 shall conduct the geotechnical investigation ~~after consultation with DOGAMI and~~ in  
8 general accordance with ~~DOGAMI open file report 00-04 “Guidelines for Engineering-~~  
9 ~~Geologic Reports and Site Specific Seismic Hazard Reports.”~~ current DOGAMI  
10 guidelines for engineering geologic reports and site-specific seismic hazard reports. The  
11 geotechnical report must, at a minimum, include geotechnical investigations at all wind  
12 turbine locations, transmission line dead-end and turning structures, substation(s), and  
13 the operations and maintenance building.

14 [Final Order V.A.2.1; AMD4]  
15

16 5.9. Before beginning construction of any new State Highway approaches or utility  
17 crossings, the certificate holder shall obtain all required permits from the Oregon  
18 Department of Transportation (ODOT) subject to the applicable conditions required by  
19 OAR Chapter 734, Divisions 51 and 55. The certificate holder shall submit the  
20 necessary application or applications in a form satisfactory to ODOT and the  
21 Department for the location, construction and maintenance of approaches to State  
22 Highway 197 for access to the site. The certificate holder shall submit the necessary  
23 application or applications in a form satisfactory to ODOT and the Department for the  
24 location, construction and maintenance of collector cables or transmission lines  
25 crossing Highway 197.

26 [Final Order V.C.2.12]  
27

28 5.10. Before beginning construction, the certificate holder shall notify the Department in  
29 advance of any work on the site that does not meet the definition of “construction” in  
30 ORS 469.300 (excluding surveying, exploration, or other activities to define or  
31 characterize the site) and shall provide to the Department a description of the work and  
32 evidence that its value is less than \$250,000.

33 [Final Order IV.B.2.6]  
34

35 5.11. Prior to the beginning of construction a Road Impact Assessment/Geotechnical Report  
36 for roads to be used by the project shall be submitted to the Department and Wasco  
37 County. Said report should include an analysis of project-related traffic routes to be  
38 used during phases of construction, project operation and decommissioning. These  
39 reports shall be incorporated into a Road Use Agreement with the County.

40 [Amended Final Order on Amendment 1 V.C.2.17]  
41

42 5.12. Prior to beginning construction of new access roads, the certificate holder shall obtain  
43 any Road Approach Permit(s) that may be required by the Wasco County Public  
44 Works Department.

45 [Final Order on Amendment 2]  
46

1 5.13. Prior to beginning construction, the certificate holder shall obtain any Utility Permit(s)  
2 that may be required by the Wasco County Public Works Department.  
3 [Final Order on Amendment 2]  
4

5 5.14. Before beginning construction, the certificate holder shall provide to the Department  
6 evidence demonstrating that the certificate holder has obtained a guarantee from the  
7 turbine manufacturer for those turbines located within one mile of the boundaries of the  
8 Deschutes Federal Wild and Scenic River and the Deschutes State Scenic Waterway  
9 that the maximum sound power of those turbines would not exceed 109 dBA plus 2 dB  
10 uncertainty when measured according to IEC (International Electrotechnical  
11 Commission) 61400-11:2002 ed. 2. No turbine shall be located closer than 0.72 miles  
12 from any protected area.  
13

## 14 **6.0. DESIGN, CONSTRUCTION, AND OPERATIONS**

15

16 6.1. The certificate holder shall:

17 a. Prior to construction, notify the Department of the identity, telephone number, e-mail  
18 address and qualifications of the full-time, on-site construction manager. Qualifications  
19 shall demonstrate that the construction manager has experience in managing permit and  
20 regulatory compliance requirements and is qualified to manage a wind facility  
21 construction project.

22 b. Prior to operation, notify the Department of the identity, telephone number, e-mail  
23 address and qualifications of the full-time, on-site operations manager. Qualifications  
24 shall demonstrate that the operations manager has experience in managing permit and  
25 regulatory compliance requirements and is qualified to manage operation of a wind  
26 facility.

27 c. Prior to facility retirement, notify the Department of the identity, telephone number,  
28 e-mail address and qualifications of the personnel or entity responsible for facility  
29 decommissioning and restoration activities. Qualifications shall demonstrate that the  
30 identified personnel have experience in managing permit and regulatory compliance  
31 requirements and are qualified to decommission a wind facility.  
32

33 The certificate holder shall notify the Department within 72-hours upon any change in  
34 personnel or contact information provided to satisfy Condition 6.1(a) through (c).

35 [Final Order on Amendment 3]  
36

37 6.2. The certificate holder shall provide portable toilets for on-site sewage handling during  
38 construction and shall ensure that they are pumped and cleaned regularly by a licensed  
39 contractor who is qualified to pump and clean portable toilet facilities.  
40 [Final Order V.C.2.1]  
41

42 6.3. The certificate holder shall implement a waste management plan during construction  
43 that includes but is not limited to the following measures:

44 a. Recycling steel and other metal scrap.

45 b. Recycling wood waste.

46 c. Recycling packaging wastes such as paper and cardboard.

- 1 d. Collecting non-recyclable waste for transport to a local landfill by a licensed water  
2 hauler.  
3 e. Segregating all hazardous wastes such as used oil, oily rags and oil-absorbent  
4 materials, mercury-containing lights and lead-acid and nickel-cadmium batteries for  
5 disposal by a licensed firm specializing in the proper recycling or disposal of  
6 hazardous wastes.  
7 f. Confining concrete delivery truck rinse-out to a designated wash-out area and burying  
8 other concrete waste as part of backfilling.  
9 [Final Order V.D.2.1]

10  
11 6.4. The certificate holder shall install the 34.5-kV collector system underground to the  
12 extent practical. The certificate holder shall install underground lines at a minimum  
13 depth of three feet. Based on geotechnical conditions or other engineering  
14 considerations, the certificate holder may install segments of the collector system  
15 aboveground, but the total length of aboveground segments must not exceed five miles.  
16 [Final Order VI.D.2.1]  
17

18  
19 6.5. In advance of, and during, preparation of detailed design drawings and specifications  
20 for the 230-kV and 34.5-kV transmission lines, the certificate holder shall consult with  
21 the Utility Safety and Reliability Section of the Oregon Public Utility Commission to  
22 ensure that the designs and specifications are consistent with applicable codes and  
23 standards.  
24 [Final Order VI.D.2.3]  
25

26 6.6. ~~[DELETED] The certificate holder must design, construct and operate the transmission-~~  
27 ~~line in accordance with the requirements of the 2012 Edition of the National Electrical-~~  
28 ~~Safety Code approved on June 3, 2011.-~~  
29 [AMD2; AMD4] [Mandatory Condition OAR 345-025-0006 (4)(a)]  
30

31 6.7. The certificate holder shall consult with the Wasco Electric Cooperative during the  
32 design, construction, and operation of the Summit Ridge Wind Farm to ensure that the  
33 integrity and reliability of the power grid in Wasco County is maintained.  
34 [Final Order VI.D.2.4]  
35

36 6.8. The certificate holder shall design and construct the facility in accordance with  
37 requirements set forth by the Oregon Building Codes Division and any other applicable  
38 codes and design procedures.  
39 [Final Order V.A.2.4]  
40

41 6.9. To protect wetlands and waterways, the certificate holder shall construct the proposed  
42 facility substantially as described in the Final Order. Specifically, the certificate holder  
43 shall not remove material from waters of the State or add new fill material to waters of  
44 the State such that the total volume of removal and fill exceeds 50 cubic yards for the  
45 project as a whole.  
46 [Final Order VI.B.2.1]

1  
2 6.10. The certificate holder shall design, engineer and construct the facility to avoid dangers  
3 to human safety presented by non-seismic hazards. As used in this condition, “non-  
4 seismic hazards” include settlement, landslides, flooding and erosion.  
5 [Final Order V.A.2.5]  
6

7 6.11. The certificate holder shall design, engineer and construct the facility to avoid dangers  
8 to human safety and the environment presented by seismic hazards affecting the site  
9 that are expected to result from all maximum probable seismic events. “Seismic hazard”  
10 includes ground shaking, ground failure, landslide, liquefaction triggering and  
11 consequences (including flow failure, settlement buoyancy, and lateral spreading),  
12 cyclic softening of clays and silts, fault rupture, directivity effects and soil-structure  
13 interaction. inundation, fault displacement and subsidence.  
14 [Final Order V.A.2.6; AMD4] [Mandatory Condition OAR 345-025-0006 (12)]  
15

16  
17 6.12. The certificate holder shall design and construct the facility using the minimum land  
18 area necessary for safe construction and operation. The certificate holder shall locate  
19 access roads and temporary construction laydown and staging areas to minimize  
20 disturbance of farming practices and, wherever feasible, shall place turbines and  
21 transmission interconnection lines along the margins of cultivated areas to reduce the  
22 potential for conflict with farm operations.  
23 [Final Order IV.D.2.7] [WCLUDO Section 3.210(J)(17)(5)]  
24

25 6.13. The certificate holder shall notify the Department, the State Building Codes Division  
26 and ~~DOGAMI~~ the Department of Geology and Mineral Industries- promptly if site  
27 investigations or trenching reveal that conditions in the foundation rocks differ  
28 significantly from those described in the application for a site certificate. After the  
29 Department receives the notice, the Council may require the certificate holder to consult  
30 with the DOGAMI and the Building Codes Division and to propose and implement  
31 corrective or mitigation actions.  
32 [Final Order V.A.2.2; AMD4] [Mandatory Condition OAR 345-025-0006 (13)]  
33

34 6.14. The certificate holder shall notify the Department, the State Building Codes Division  
35 and DOGAMI promptly if shear zones, artesian aquifers, deformations or clastic dikes  
36 are found at or in the vicinity of the site. After the Department receives notice, the  
37 Council may require the certificate holder to consult with the Department of Geology  
38 and Mineral Industries and Building Codes Division to propose and implement  
39 corrective or mitigation actions.  
40 [Final Order V.A.2.3; AMD4] [Mandatory Condition OAR 345-025-0006 (14)]  
41

42 6.15. To reduce the visual impact of the facility, the certificate holder shall:  
43 a. Mount nacelles on smooth, steel structures, painted uniformly in a low-reflectivity,  
44 neutral gray, white, or off-white color.  
45 b. Paint the substation structures in a low-reflectivity neutral color to blend with the  
46 surrounding landscape.



- c. Not allow any advertising to be used on any part of the facility.
  - d. Use only those signs required for facility safety, required by law or otherwise required by this site certificate, except that the certificate holder may erect a sign near the O&M building to identify the facility, may paint turbine numbers on each tower and may allow unobtrusive manufacturers' logos on turbine nacelles.
  - e. Maintain any signs allowed under this condition in good repair.
- [Final Order IV.I.2.1]

6.16. The certificate holder shall design and construct the O&M building to be generally consistent with the character of similar buildings used by commercial farmers or ranchers in the area and shall paint the building in a low-reflectivity, neutral color to blend with the surrounding landscape.

[Final Order IV.I.2.2]

6.17. The certificate holder shall design and construct new access roads and private road improvements to standards approved by the Wasco County Road Department. 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 Wasco County Road Department. Where modifications of State roads or highways are necessary, the certificate holder shall construct the modifications entirely within the public road rights-of-way and in conformance with ODOT standards subject to the approval of ODOT.

[Final Order V.C.2.13]

6.18. The certificate holder shall cooperate with the Wasco County Public Works Department to ensure that any unusual damage or wear to county roads that is caused by construction of the facility is repaired by the certificate holder. Upon completion of construction, the certificate holder shall restore public roads to pre-construction condition or better to the satisfaction of the applicable county departments.

[Final Order V.C.2.14]

6.19. During construction of the facility, the certificate holder shall implement measures to reduce traffic impacts, including:

- a. Providing notice to adjacent landowners when heavy construction traffic is anticipated.
- b. Providing appropriate traffic safety signage and warnings.
- c. Requiring flaggers to be at appropriate locations at appropriate times during construction to direct traffic reduce accident risks.
- d. Using traffic diversion equipment (such as advance signage and pilot cars) when slow or oversize construction loads are anticipated.
- e. Maintaining 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.
- f. Encouraging carpooling for the construction workforce.
- g. Including traffic control procedures in contract specifications for construction of the facility.
- h. Keeping Highway 197 free of gravel that tracks out onto the highway at facility



access points.  
[Final Order V.C.2.15]

6.20. The certificate holder shall ensure 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 County Roadmaster.  
[Final Order V.C.2.16]

6.21. The height of the proposed Operations and Maintenance building shall not exceed 35 feet in height.  
[Final Order IV.D.2.1] [WCLUDO Section 3.210(F)(2)]

6.22. Signage for the proposed facility shall conform to the following requirements:  
a. The certificate holder shall install the following signs at the facility:  
i. "No Trespassing" signs shall be attached to any perimeter fence;  
ii. "Danger" signs shall be posted at the height of five feet on turbine towers and accessory structures;  
iii. A sign shall be posted on the tower showing an emergency telephone number; and  
iv. Manual electrical and/or overspeed shutdown disconnect switch(es) shall be clearly labeled.

[Final Order IV.D.2.2] [WCLUDO Section 19.030(C)(7)]

b. Signage installed in accordance with Condition 6.22.a shall meet the following requirements:

- i. Permanent signs shall not project beyond the property line.
- ii. Signs shall not be illuminated or capable of movement.
- iii. Permanent signs shall describe only uses permitted and conducted on the property on which the sign is located.
- iv. Freestanding signs shall be limited to twelve square feet in area and 8 feet in height measured from natural grade. Signs on buildings are permitted in a ratio of one square foot of sign area to each linear foot of building frontage but in no event shall exceed 32 square feet and shall not project above the building.
- v. Freestanding signs shall be limited to one at the entrance of the property. Up to one additional sign may be placed in each direction of vehicular traffic running parallel to the property if they are more than 750 feet from the entrance of the property.
- vi. Signs on buildings shall be limited to one per building and only allowed on buildings conducting the use being advertised.

[Final Order IV.D.2.2] [WCLUDO Section 3.210(F)(4)]

6.23. Except as necessary to meet the requirements of the Federal Aviation Administration to warn aircraft of obstructions, the certificate holder shall design and implement a lighting plan to ensure that all outdoor lighting is directed downward, limited in

intensity, and is shielded and hooded to prevent light from projecting onto adjacent properties, roadways, and waterways. Shielding and hooding materials shall be composed of nonreflective, opaque materials.

[Final Order IV.D.2.3] [WCLUDO section 3.210(F)(4)]

- 6.24. The certificate holder shall be responsible for restoring, as nearly as possible, to its former condition any agricultural land and associated improvements that are damaged or otherwise disturbed by the siting, maintenance, repair or reconstruction of the facility.

[Final Order IV.D.2.5] [WCLUDO Section 3.210(J)(8)(c)]

- 6.25. The certificate holder shall consult with area landowners and lessees during construction and operation of the facility and shall implement measures to reduce or avoid any adverse impacts to farm practices on surrounding lands and to avoid any increase in farming costs.

[Final Order IV.D.2.6] [WCLUDO Sections 5.020(J) and 5.020(K)]

- 6.26. The certificate holder shall not use exterior nighttime lighting except:

- a. The minimum turbine tower lighting required or recommended by the Federal Aviation Administration.
- b. Safety and security lighting at the O&M facility and substation, if such lighting is shielded or downward-directed to reduce offsite glare.

[Final Order IV.I.2.3]

- 6.27. The certificate holder shall design, construct and operate the facility in a manner to ensure that the facility avoids any material signal interference with communication systems such as, but not limited to, radio, telephone, television, satellite, microwave or emergency communication systems. Should any material interference occur, the certificate holder must develop and implement a mitigation plan in consultation with the Department.

[Amended Final Order on Amendment 1 IV.D.2.9]

- 6.28. During facility design and construction, the certificate holder shall comply with the following turbine setback distances, as measured from the centerline of the turbine to the edge of the dwelling, as set forth below.

- a. Except as provided in subsection (b) of this condition, wind turbines shall be set back from the property line of any abutting property not part of the project (non-project boundaries), the right-of-way of any dedicated road, and any above ground major utility facility line a minimum of 1.5 times the blade tip height of the wind turbine tower. Wind turbines shall be set back from any above ground minor utility facility line a minimum of 1.1 times the blade tip height of the wind turbine tower.
- b. Wind turbine tower numbers 21, 22, 23, 24, 26, 27, 28, 29, 30, 54, 55, 56, 57, 58, 59, 60, and 61 shall be set back a minimum of 1.1 times the blade tip height of the wind turbine tower from the right-of-way of any dedicated road within the site boundary.
- c. Wind turbines must be setback a minimum of 1 mile (5,280 feet) from all non-resource zoned property boundaries located outside of urban growth boundaries or

1 urban reserves (as measured from the centerline of the turbine to the edge of the  
2 property boundary zoned for non-resource purposes, e.g. rural residential).  
3 [Final Order on Amendment 2]  
4

5 6.29. The certificate holder must maintain all access roads for all-weather use to assure  
6 adequate, safe and efficient emergency vehicle and maintenance vehicle access to the  
7 site.  
8 [Amended Final Order on Amendment 1 V.C.2.18]  
9

10 6.30. The certificate holder shall submit a legal description of the site to the Wasco County  
11 GIS Department upon the beginning operation of the facility. This information shall  
12 include the actual latitude and longitude or Oregon State Plane North American Datum  
13 1983 (NAD83) High Accuracy Reference Network (HARN) coordinates of each turbine  
14 tower, support structures for the 34.5-kV collector lines and 230-kV transmission line,  
15 and other related and supporting facilities. The certificate holder may provide the  
16 information in a GIS layer based on the geospatial data that includes all characteristics  
17 of spatial features of the facility site boundary. The certificate holder shall confer with  
18 the Department prior to submittal of GIS-based information.  
19 [Amended Final Order on Amendment 1 IV.D.2.11]  
20

21 6.31. During facility construction and operation, the certificate holder shall report to the  
22 Department, within 7 days, any change in the corporate structure of Pattern  
23 Renewables 2 LP, Pattern Energy Group 2 LP (the sole limited partner), and Pattern  
24 Energy Group LP. The certificate holder shall report promptly to the Department any  
25 change in its access to the resources, expertise, and personnel of Pattern Renewables 2  
26 LP, Pattern Energy Group 2 LP (the sole limited partner), and Pattern Energy Group  
27 LP.  
28 [Final Order on Amendment 3]  
29

30 6.32 During facility design and construction, the certificate holder shall ensure that the  
31 foundations of the turbines, substation, and operations and maintenance building are set  
32 back a minimum of 100 feet from any waterbodies designated as fish-bearing, 50 feet  
33 from any waterbodies designated as non-fish bearing, and 25 feet from all waterbodies  
34 (seasonal or permanent) not identified on any federal, state, or local inventory.  
35 [Final Order on Amendment 2]  
36

37 6.33 During facility design and construction, the certificate holder shall ensure that facility  
38 components are not developed within the Environmental Protection District 4 as  
39 designated by Wasco County.  
40 [Final Order on Amendment 2]  
41

42 6.34 During facility design and construction, the certificate holder shall ensure that facility  
43 components are sited to avoid direct impacts to wetlands and waterways.  
44 [Final Order on Amendment 2]  
45  
46

## 7.0. PUBLIC HEALTH AND SAFETY

7.1. 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 certificate holder shall keep tower access doors locked at all times, except when authorized personnel are present.

[Final Order IV.K.2.1]

7.2. For turbine types having pad-mounted step-up transformers, the certificate holder shall install the transformers at the base of each tower in locked cabinets designed to protect the public from electrical hazards and to avoid creation of artificial habitat for raptor prey.

[Final Order IV.K.2.2]

7.3. To protect the public from electrical hazards, the certificate holder shall enclose the facility substation with appropriate fencing and locked gates.

[Final Order IV.K.2.3]

7.4. The certificate holder shall follow manufacturers' recommended handling instructions and procedures to prevent damage to turbine or turbine tower components that could lead to failure. In the compliance plan required per OAR 345-026-0048, the certificate holder shall describe the process or protocol to be implemented to ensure that manufacturer's handling instruction and procedures are followed during equipment delivery.

[Final Order IV.K.2.5; AMD4]

7.5. Prior to operation, the certificate holder shall:

a. ~~have~~ Submit to the Department, for review and approval, an operational safety-monitoring program and that includes a cause analysis program. The safety monitoring program shall include, at a minimum, requirements for regular turbine blade and turbine tower component inspections and maintenance, based on wind turbine manufacturer recommended frequency.

b. ~~shall Document the inspection of and maintenance activities of~~ all turbine and turbine tower components on a regular basis. The inspection documentation must include, but is not limited to, the 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. The certificate holder shall maintain or repair turbine and turbine tower components as necessary to protect public safety

c. 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 a blade or tower failure event, submit a root cause analysis to the Department for compliance evaluation.

[Final Order IV.K.2.6; AMD4]

- 7.6. The certificate holder shall install and maintain self-monitoring devices on each turbine, linked to sensors at the operations and maintenance building, to alert operators to potentially dangerous conditions, and the certificate holder shall immediately remedy any dangerous conditions. 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.

[Final Order IV.K.2.7]

- 7.7. The certificate holder shall notify the Department of Energy and Wasco County within 72 hours of any occurrence involving the facility if:
- a. There is an attempt by anyone to interfere with its safe operation;
  - b. A natural event such as an earthquake, flood, tsunami or tornado, or a human- caused event such as a fire or explosion affects or threatens to affect the public health and safety or the environment;
  - c. There is a mechanical failure or accident on the site associated with construction or operation of the facility that may result in public health and safety concerns; or
  - d. There is any fatal injury at the facility.

[Final Order IV.K.2.8 and OAR 345-026-017]

- 7.8. During operation, the certificate holder shall discharge sanitary wastewater generated at the Operations and Maintenance building to a licensed on-site septic system in compliance with State of Oregon permit requirements. The certificate holder shall design the septic systems for a discharge capacity of less than 5,000 gallons per day.

[Final Order V.C.2.2]

- 7.9. The certificate holder shall take reasonable steps to reduce or manage human exposure to electromagnetic fields, including but not limited to:
- a. Constructing all aboveground 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 20 feet from the ground.
  - c. Constructing all aboveground 230-kV transmission lines with a minimum clearance of 25 feet from the ground
  - d. Providing to landowners a map of underground and overhead transmission lines on their property and advising landowners of possible health risks from electric and magnetic fields.
  - e. 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.
  - f. Designing and maintaining all transmission lines so that induced voltages during operation are as low as reasonably achievable.

[Final Order VI.D.2.2]

- 7.10. The certificate holder must develop and implement a program that provides reasonable

1 assurance that all fences, gates, cattle guards, trailers, or other objects or structures of a  
2 permanent nature that could become inadvertently charged with electricity are grounded  
3 or bonded throughout the life of the line.

4 [Final Order IV.M.2.2] [Site Specific Condition OAR 345-027-0023(4)]  
5

- 6 7.11. A current copy of the electrical protection plan developed in compliance with Condition  
7 7.10 must be available at the O&M building and provided upon request by ODOE staff.  
8 [Final Order IV.M.2.3]  
9

- 10  
11 7.12 Prior to construction, the certificate holder shall schedule a time to brief the OPUC  
12 Safety, Reliability, and Security Division (Safety) Staff as to how it will comply with  
13 OAR Chapter 860, Division 024 during design, construction, operations, and  
14 maintenance of the facilities.  
15 [Final Order on Amendment 2]  
16

- 17 7.13 During operation, the certificate holder shall:  
18 a. Update the OPUC Safety Staff as to how the operator will comply with OAR Chapter  
19 860, Division 024 on an ongoing basis considering future operations, maintenance,  
20 emergency response, and alterations until facility retirement.  
21 b. File the following required information with the Commission:  
22 i. Each person who is subject to the Public Utility Commission's authority under  
23 ORS 757.035 and who engages in the operation of an electric power line as  
24 described in ORS 757.035 must provide the commission with the following  
25 information before January 2 of each even-numbered year:  
26 a. The name and contact information of the person that is responsible for  
27 the operation and maintenance of the electric power line, and for  
28 ensuring that the electric power line is safe, on an ongoing basis; and  
29 b. The name and contact information of the person who is responsible for  
30 responding to conditions that present an imminent threat to the safety  
31 of employees, customers and the public.  
32 ii. In the event that the contact information described in subsection (a) of this  
33 condition changes or that ownership of the electric power line changes, the  
34 person who engages in the operation of the electric power line must notify the  
35 commission of the change as soon as practicable, but no later than within 90  
36 days.  
37 iii. If the person described in subsection (a) of this condition is not the public  
38 utility, as defined in ORS 757.005, in whose service territory the electric  
39 power line is located, the commission shall make the information provided to  
40 the commission under subsection (1) of this section available to the public  
41 utility in whose service territory the electric power line is located. [2013  
42 c.235 §3]  
43 c. Provide OPUC Safety Staff with:  
44 i. Maps and Drawings of routes and installation of electrical supply lines  
45 showing:  
46 • Transmission lines and structures (over 50,000 Volts)

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- Distribution lines and structures - differentiating underground and overhead lines (over 600 Volts to 50,000 Volts)
  - Substations, roads and highways
- ii. Plan and profile drawings of the transmission lines (and name and contact information of responsible professional engineer).
- [Final Order on Amendment 2]



## 8.0. ON-SITE SAFETY AND SECURITY

8.1. During construction and operation of the facility, the certificate holder shall provide for on-site security and shall establish good communications between on-site security personnel and the Wasco County Sheriff's Office. 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 on the facility site.  
[Final Order V.C.2.3]

8.2. Prior to construction, the certificate holder shall require that all on-site construction contractors develop a site health and safety plan to be implemented during facility construction that informs workers and others on-site about first aid techniques and what to do in case of an emergency and that includes important telephone numbers and the locations of on-site fire extinguishers and nearby hospitals. The certificate holder shall ensure that construction contractors have personnel on-site who are trained and equipped for tower rescue and who are first aid and CPR certified.  
[Final Order on Amendment 2]

8.3. Prior to commencing operation, the certificate holder shall develop a site health and safety plan to be implemented during facility operation that informs employees and others on-site about first aid techniques and what to do in case of an emergency and that includes important telephone numbers and the locations of on-site fire extinguishers and nearby hospitals. The certificate holder shall ensure that operations personnel are trained and equipped for tower rescue. The facility must maintain training records and have a current copy of the site health and safety plan on-site and available upon request by the Department of Energy.  
[Final Order on Amendment 2]

8.4. Prior to construction, the certificate holder shall develop fire safety plans in consultation with the Columbia Rural Fire District to minimize the risk of fire and to respond appropriately to any fires that occur on the facility site. The plans shall be maintained onsite and implemented throughout construction and operation of the facility. In developing the fire safety plans, the certificate holder shall take into account the dry nature of the region and shall address risks on a seasonal basis. The certificate holder shall meet annually with local fire protection agency personnel to discuss emergency planning and shall invite local fire protection agency personnel to observe any emergency drill or tower rescue training conducted at the facility.  
[Final Order on Amendment 2]

- 1 8.5. Upon the beginning of operation of the facility, the certificate holder shall provide a site  
2 plan to the Columbia Rural Fire District. The certificate holder shall indicate on the site  
3 plan the identification number assigned to each turbine and the actual location of all  
4 facility structures. The certificate holder shall provide an updated site plan if additional  
5 turbines or other structures are later added to the facility. During operation, the  
6 certificate holder shall ensure that appropriate fire protection agency personnel have an  
7 up-to-date list of the names and telephone numbers of facility personnel available to  
8 respond on a 24-hour basis in case of an emergency on the facility site.  
9 [Final Order V.C.2.7]
- 10
- 11 8.6. The certificate holder shall construct turbines and pad-mounted transformers on  
12 concrete foundations and shall cover the ground within a 15-foot radius with non-  
13 flammable material. The certificate holder shall maintain the non-flammable pad area  
14 covering during operation of the facility.  
15 [Final Order V.C.2.8]
- 16
- 17 8.7. During construction and operation of the facility, the certificate holder shall ensure that  
18 the O&M building and all service vehicles are equipped with shovels and portable fire  
19 extinguishers of a 4A5OBC or equivalent rating.  
20 [Final Order V.C.2.9]
- 21
- 22 8.8. During construction, the certificate holder shall ensure that construction vehicles and  
23 equipment are operated on graveled areas to the extent possible and that open flames,  
24 such as cutting torches, are kept away from dry grass areas.  
25 [Final Order V.C.2.10]
- 26
- 27 8.9. During operation, the certificate holder shall ensure that all on-site employees receive  
28 annual fire prevention and response training by qualified instructors or members of the  
29 local fire districts. The certificate holder shall ensure that all employees are instructed to  
30 keep vehicles on roads and off dry grassland, except when off-road operation is  
31 required for emergency purposes.  
32 [Final Order V.C.2.11]
- 33
- 34

## 9.0. PROTECTION OF SOIL

- 9.1. The certificate holder shall conduct all construction work in compliance with an Erosion and Sediment Control Plan (ESCP) satisfactory to the Oregon Department of Environmental Quality and as required under the National Pollutant Discharge Elimination System (NPDES) Storm Water Discharge General Permit #1200-C. The certificate holder shall include in the ESCP any procedures necessary to meet local erosion and sediment control requirements or storm water management requirement. [Final Order IV.C.2.1]
- 9.2. During construction, the certificate holder shall limit truck traffic to improved road surfaces to avoid soil compaction and wind erosion on dirt roads, to the extent practicable. [Final Order IV.C.2.2]
- 9.3. During construction, the certificate holder shall implement best management practices to control any dust generated by construction activities, such as applying water to roads and disturbed soil areas. [Final Order IV.C.2.3]
- 9.4. The certificate holder shall handle hazardous materials used on the site in a manner that protects public health, safety and the environment and shall comply with all applicable local, state and federal environmental laws and regulations. The certificate holder shall not store diesel fuel or gasoline on the facility site. [Final Order IV.C.2.4]
- 9.5. If a spill or release of hazardous material occurs during construction or operation of the facility, the certificate holder shall notify the Department within 72 hours and shall clean up the spill or release and dispose of any contaminated soil or other materials according to applicable regulations. The certificate holder shall make sure that spill kits containing items such as absorbent pads are located on equipment and at the O&M building. The certificate holder shall instruct employees about proper handling, storage and cleanup of hazardous materials. [Final Order IV.C.2.5]
- 9.6. 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 and in compliance with the Revegetation and Weed Control Plan (Exhibit 1 to the Final Order). 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. [Final Order IV.C.2.6] [Mandatory Condition OAR 345-025-0006 (11)]

1 9.7. During operation of the facility, the certificate holder shall restore areas that are  
2 temporarily disturbed during facility maintenance or repair activities using the same  
3 methods and monitoring procedures described in the Revegetation and Weed Control  
4 Plan.  
5 [Final Order IV.C.2.7]  
6

7 9.8. During facility operation, the certificate holder shall routinely inspect and maintain all  
8 transmission line corridors, roads, pads and trenched areas and, as necessary, maintain  
9 or repair erosion and sediment control measures and control the introduction and spread  
10 of noxious weeds.  
11 [Final Order IV.C.2.8]  
12  
13

1 **10.0. PROTECTION OF NATURAL RESOURCES**

2  
3 10.1. Before beginning construction, the certificate holder shall provide to the Department, to  
4 the Oregon Department of Fish and Wildlife (ODFW) and to the Planning Director of  
5 Wasco County detailed maps of the facility site, showing the final locations where the  
6 certificate holder proposes to build facility components, and a table showing the acres  
7 of temporary habitat impact by habitat category and subtype and the acres of permanent  
8 habitat impact by habitat category and subtype. The detailed maps of the facility site  
9 shall indicate the habitat categories of all areas that would be affected during  
10 construction. In classifying the affected habitat into habitat categories, the certificate  
11 holder shall consult with ODFW. The certificate holder shall not begin ground  
12 disturbance in an affected area until the habitat assessment has been approved by the  
13 Department. The Department may employ a qualified contractor to confirm the habitat  
14 assessment by on-site inspection.  
15 [Final Order IV.G.2.1]

16  
17 10.2. The certificate holder shall incorporate the design elements listed below into the final  
18 facility design to avoid or mitigate impacts to sensitive wildlife habitat:  
19 a. Where practicable, facility components and construction areas shall be located to  
20 avoid or minimize temporary and permanent impacts to high quality native habitat  
21 and to retain habitat cover in the general landscape.  
22 b. No facility components may be constructed within areas of Category 1 habitat and  
23 temporary disturbance of Category 1 habitat shall be avoided.  
24 c. The design of the facility and areas of temporary and permanent disturbance shall  
25 avoid impacts to any Category 1 habitat, to any State-listed threatened or endangered  
26 plant or wildlife species, and to any State Candidate plant species.  
27 [Final Order IV.G.2.2]

28  
29 10.3. The certificate holder shall implement measures to avoid or mitigate impacts to  
30 sensitive wildlife habitat during construction including, but not limited to, the  
31 following:  
32 a. Preparing and distributing maps to employees and contractors to show areas that are  
33 off-limits to construction personnel, such as nesting or denning areas for sensitive  
34 wildlife species;  
35 b. Avoiding unnecessary road construction, temporary disturbance and vehicle use;  
36 c. Limiting construction work to approved and surveyed areas shown on facility  
37 constraint maps; and  
38 d. Ensuring that all construction personnel are instructed to avoid driving cross- country  
39 or taking short-cuts within the site boundary or otherwise disturbing areas outside of  
40 the approved and surveyed construction areas.  
41 [Final Order IV.G.2.3]

10.4. Prior to construction, the certificate holder shall:

- a. Select qualified specialists (wildlife biologist/botanist) that have substantial experience in creating, enhancing, and protecting habitat mitigation areas within Oregon;
  - b. Notify the Department of the identity and qualifications of the personnel or contractors selected to implement and manage the habitat mitigation area;
  - c. Acquire the legal right to create, enhance, maintain and protect a habitat mitigation area, as long as the site certificate is in effect, by means of an outright purchase, conservation easement or similar conveyance;
  - d. ~~Provide~~Conduct a field-based habitat assessment of the habitat mitigation sites, based on a protocol approved by the Department in consultation with ODFW, which includes methodology, habitat map, and available acres by habitat category and subtype in tabular format.
  - e. Develop and submit a final Habitat Mitigation Plan (HMP) for approval by the Department in consultation with ODFW, based upon the draft amended HMP included as Attachment G of the Final Order on Amendment #2. The Council retains the authority to approve, reject or modify the final HMP and any future amendments; and,
  - ef. Improve the habitat quality, within the habitat mitigation area, as described in the final HMP, and as amended ~~from time to time~~.
- [Final Order on Amendment 2; AMD4]

10.5. Prior to construction, the certificate holder shall finalize the Wildlife Monitoring and Mitigation Plan (WMMP), based on the draft WMMP included as Attachment F of the *Final Order on Amendment 4#2*, as approved by the Department in consultation with ODFW. The certificate holder shall conduct wildlife monitoring as described in the final WMMP, as amended from time to time. The final WMMP shall specify that the first long-term raptor nest survey will be conducted in the first raptor nesting season that is at least 5 years after the completion of construction and is in a year that is divisible by five (i.e., 2020, 2025, 2030); the certificate holder shall repeat the survey at 5-year intervals thereafter. The final WMMP must include a requirement that the certificate holder consult with the Department and ODFW after concluding the required two-year operational avian fatality monitoring. If the results of the two-year operational avian fatality monitoring exceed thresholds of concern established in the WMMP, the certificate holder must provide additional mitigation in a form and amount agreed upon by the Department, in consultation with ODFW. If the two-year operational avian fatality monitoring results exceed thresholds of concern established in the WMMP, in addition to the mitigation that must be provided per this condition, the certificate holder must conduct an additional two-years of avian fatality monitoring, and report those results to the Department and ODFW for review and if necessary, further mitigation as agreed upon by the Department in consultation with ODFW. The results of the avian fatality monitoring must be posted to the Department website and presented to EFSC by Department and ODFW staff.

[Final Order on Amendment 2; AMD4]

10.6. The certificate holder shall hire a qualified environmental professional to provide

environmental training during construction and operation. Environmental training includes information on the sensitive species present onsite, precautions to avoid injuring or destroying wildlife or sensitive wildlife habitat, exclusion areas, permit requirements and other environmental issues. The certificate holder shall instruct construction and operations personnel to report any injured or dead wildlife detected while on the site to the appropriate onsite environmental manager.  
[Final Order IV.G.2.6]

10.7. Before beginning construction, ~~and after considering all micrositing factors,~~ the certificate holder shall:

- a) Consider micrositing factors designed to minimize bird and bat collision risk including but not limited to locating wind turbines away from saddles in long ridges and locating wind turbines on the top of or slightly downwind of distinct ridges and set back from the prevailing upwind side. The certificate holder shall provide a map, to the Department and ODFW, showing the final design locations of all facility components and the areas of potential disturbance, and that identifies geographic and micrositing factors considered in final design.
- b) ~~provide to the Department a map showing the final design locations of all components of the facility and the areas that would be disturbed during construction and identifying the survey areas for all plant and wildlife surveys. This information may be combined with the map submitted per the requirements of Condition 10.1. The certificate holder shall hire a qualified professional biologist to conduct a pre-construction habitat survey (Condition 10.7) and Threatened and Endangered (T&E) plant survey (Condition 10.13). The surveys shall be conducted concurrently and in accordance with the survey protocol set forth in the Survey Protocol provided in Attachment G of the Final Order on Amendment 4 (for T&E plants and raptors), and in accordance with a survey protocol reviewed and approved by ODFW for habitat categorization. The survey area will include plant and wildlife investigation within 400 feet of all areas within the micrositing corridor and extending 200 feet, in accordance with the T&E plant survey protocol, from potential habitat (e.g. non Category 6 habitat) disturbance, that would be disturbed during construction which is located within the site boundary, that lie outside of the previously surveyed areas. The pre-construction construction habitat and T&E plant survey shall be planned in consultation with the Department and ODFW, and shall include both desktop and field surveys survey protocols shall to be confirmed with the Department and ODFW. The desktop survey shall evaluate habitat within the analysis area, or within 1/2 mile from the site boundary (analysis area). Field surveys shall be conducted the entirety of the micrositing corridor in areas that are not active agriculture (Category 6 habitat).~~
- a)c) Following completion of the habitat and T&E plant field surveys, and final layout design and engineering, the certificate holder shall provide the Department and ODFW a report containing the results of the survey, showing expected final location of all facility components, the habitat categories of all areas that will be affected by facility components, and the locations of any sensitive resources. The report shall present in tabular format the acres of



1 expected temporary and permanent impacts to each habitat category, type, and  
2 sub-type. The pre-construction habitat survey shall be used to complete final  
3 design, facility layout, and any additional micro-siting adjustment of facility  
4 components. Based on the field survey report, the Department in consultation  
5 with ODFW shall verify that the final facility layout, design, and construction  
6 timing minimizes impacts to non-Category 6 habitat, state-listed sensitive  
7 species, and state-listed threatened and endangered species. The report must be  
8 posted to the Department website. The results of the survey must be presented  
9 to EFSC at a future EFSC meeting by both the Department and ODFW staff.  
10 As part of the report, the certificate holder shall include its impact assessment  
11 methodology and calculations, including assumed temporary and permanent  
12 impact acreage for each transmission structure, wind turbine, access road, and  
13 all other facility components. If construction laydown yards are to be retained  
14 post construction, due to a landowner request or otherwise, the construction  
15 laydown yards must be calculated as permanent impacts, not temporary.

16 [Final Order on Amendment 2; AMD4]

- 17  
18 10.8. The certificate holder shall reduce the risk of injuries to avian species by:  
19 a. Installing turbine towers that are smooth steel structures that lack features that would  
20 allow avian perching.  
21 b. Installing meteorological towers that are non-guyed structures to eliminate the risk of  
22 avian collision with guy-wires.  
23 c. Designing and installing all aboveground transmission line support structures  
24 following the most current suggested practices for avian protection on power lines  
25 published by the Avian Power Line Interaction Committee.

26 [Final Order IV.H.2.1]

- 27  
28 10.9. During facility operation, the certificate holder shall obtain water for on-site uses from  
29 an on-site well located near the O&M building. The certificate holder shall construct the  
30 on-site well subject to compliance with the provisions of ORS 537.765 relating to  
31 keeping a well log. The certificate holder shall not use more than 5,000 gallons of water  
32 per day from the on-site well. The certificate holder may use other sources of water for  
33 on-site uses subject to prior approval by the Department.

34 [Final Order VI.C.2.1]

- 35  
36 10.10. During facility operation, if equipment washing becomes necessary, the certificate  
37 holder shall ensure that there is no runoff of wash water from the site or discharges to  
38 surface waters, storm sewers or dry wells. The certificate holder shall not use acids,  
39 bases or metal brighteners with the wash water. The certificate holder may use  
40 biodegradable, phosphate-free cleaners sparingly.

41 [Final Order VI.C.2.2]

- 42  
43 10.11. The certificate holder shall implement a waste management plan during operation that  
44 includes but is not limited to the following measures:

- 45 a. Training employees to minimize and recycle solid waste.  
46 b. Recycling paper products, metals, glass and plastics.

- c. Recycling used oil and hydraulic fluid.
- d. Collecting non-recyclable waste for transport to a local landfill by a licensed waste hauler.
- e. Segregating all hazardous, non-recyclable 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 wastes.

[Final Order V.D.2.2]

- 10.12 The certificate holder shall not conduct any construction activities on land mapped as Big Game Winter Range by the Oregon Department of Fish and Wildlife between December 1 and April 15. 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 big game and big game habitat in the relevant area. The Department will consult with ODFW on any request made under this condition.

[Amended Final Order on Amendment 1 IV.G.2.2; AMD4]

- 10.13. Prior to the beginning of construction of the facility the certificate holder shall perform new field surveys for threatened and endangered species following the survey protocol set forth in the Northwest Wildlife Consultants Memorandum regarding Endangered and Threatened Plant Species and Raptor Nest Surveys dated October 17, 2014. The certificate holder shall report the results of the field surveys to the Department, ODA and ODFW. If the surveys identify the presence of threatened or endangered species within the survey area, the certificate holder shall implement appropriate measures to avoid a significant reduction in the likelihood of survival or recovery of the species, as approved by the Department, in consultation with ODA and ODFW.

[Amended Final Order on Amendment 1 IV.H.2.2]

- 10.14. The certificate holder shall conduct two (2) seasons of raptor nest surveys with at least one (1) season of the surveys occurring prior to the beginning of construction. The raptor nest surveys shall be conducted following the instructions set forth in the Raptor Nest Survey Protocol for Summit Ridge Wind Farm included as Attachment GB to the ~~First Amended Site Certificate~~ Final Order on Amendment 4. The certificate holder shall report the results of the field surveys to the Department and ODFW. If the surveys identify the presence of raptor nests within the survey area, the certificate holder shall implement appropriate measures to assure that the design, construction and operation of the facility are consistent with the fish and wildlife habitat mitigation goals and standards of OAR 635-415-0025, as approved by the Department, in consultation with ODFW.

~~[Amended Final Order on Amendment 1]~~ Final Order on ASC, Condition IV.G.2.8; AMD1; AMD4

- 10.15. During construction the certificate holder shall observe the raptor nest avoidance guidelines shown in the following table around known raptor nests in the vicinity of

ground-disturbing construction activities, unless the nest fledges young, the nest fails (i.e., is abandoned), or the Department in consultation with ODFW approves an alternative plan.

Species	Disturbance Buffer	Nesting Season – Avoidance Period
Golden eagle	0.25 mile	Feb 1 - Aug 31
Red-tailed hawk	500 feet	Mar 1 - Aug 31
Ferruginous hawk	0.25 mile	Mar 15 - Aug 15
Swainson’s hawk	0.25 mile	April 1 - Aug 15
Prairie Falcon	0.25 mile	Jan 1 - Jul 31
American peregrine falcon	0.5 mile	Mar 15 - Jul 15
American kestrel	0.25 mile	Mar 1 - Jul 31

[Final Order on Amendment 2]

1 **11.0. PROTECTION OF HISTORIC, CULTURAL AND ARCHAEOLOGICAL**  
2 **RESOURCES**  
3

4 11.1. Before beginning construction, the certificate holder shall label all identified historic,  
5 cultural or archaeological resource sites on construction maps and drawings as “no  
6 entry” areas. The applicant shall implement a 200 foot buffer for all rock alignment and  
7 cairn sites, and shall implement a 100 foot buffer for all other archaeological sites. The  
8 certificate holder may use existing private roads within the buffer areas but may not  
9 widen or improve private roads within the buffer areas. The no-entry restriction does  
10 not apply to public road rights-of-way within the buffer areas.

11 [Final Order Section V.B.2.1]  
12

13 11.2. Before beginning construction, the certificate holder shall provide to the Department a  
14 map showing the final design locations of all components of the facility, the areas that  
15 would be temporarily disturbed during construction and the areas that were previously  
16 surveyed as described in the Application for Site Certificate.

17 [Final Order V.B.2.2]  
18

19 11.3. The certificate holder shall hire qualified personnel to conduct field investigation of all  
20 areas to be disturbed during construction that lie outside the previously-surveyed areas.  
21 The certificate holder shall provide a written report of the field investigation to the  
22 Department and to the Oregon State Historic Preservation Office (SHPO). If any  
23 potentially significant historic, cultural or archaeological resource sites are found during  
24 the field investigation, the certificate holder shall instruct all construction personnel to  
25 avoid the identified sites and shall implement appropriate measures to protect the sites,  
26 including the measures described in Condition 11.5 and in accordance with the  
27 Archaeological Monitoring Plan required per Condition 11.6.

28 [Final Order V.B.2.3]  
29

30 11.4. The certificate holder shall ensure that a qualified archaeologist, as defined in OAR  
31 736-051-0070, instructs construction personnel in the identification of cultural materials  
32 and avoidance of accidental damage to identified resource sites. Records of such  
33 training shall be maintained at the Operations and Maintenance Building and made  
34 available to authorized representatives of the Oregon Department of Energy upon  
35 request.

36 [Final Order V.B.2.4]  
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- 1 11.5. The certificate holder shall ensure that construction personnel cease all ground-  
2 disturbing activities in the immediate area if any archaeological or cultural resources are  
3 found during construction of the facility until a qualified archeologist can evaluate the  
4 significance of the find. The certificate holder shall notify the Department and SHPO of  
5 the find. If the SHPO determines that the resource is significant, the certificate holder  
6 shall make recommendations to the Council for mitigation, including avoidance, field  
7 documentation and data recovery, in consultation with the Department, SHPO,  
8 interested tribes and other appropriate parties. The certificate holder shall not restart  
9 work in the affected area until the certificate holder has demonstrated to the Department  
10 and the SHPO that it has complied with archaeological resource protection regulations.  
11 [Final Order V.B.2.5]  
12
- 13 11.6. The certificate holder shall prepare and implement an Archaeological Monitoring Plan  
14 for construction and maintenance activities to address and mitigate impacts from  
15 exposure of unanticipated or previously unidentified cultural properties that may be  
16 exposed during construction or operation of the facility. A current copy of the plan must  
17 be maintained at the Operations and Maintenance Building and made available to  
18 authorized representatives of the Oregon Department of Energy upon request.  
19 [Final Order V.B.2.6]  
20

## 12.0. NOISE CONTROL AND NOISE COMPLAINT RESPONSE

- 12.1. To reduce construction noise impacts at nearby residences, the certificate holder shall:
- a. Confine the noisiest operation of heavy construction equipment to the daylight hours.
  - b. Require contractors to install and maintain exhaust mufflers on all combustion engine-powered equipment; and
  - c. Establish a complaint response system at the construction manager's office to address noise complaints. Records of noise complaints during construction must be made available to authorized representatives of the Department of Energy upon request.

[Final Order VI.A.2.1]

- 12.2. Before beginning construction, the certificate holder shall provide to the Department:
- a. Information that identifies the final design locations of all turbines to be built at the facility;
  - b. The maximum sound power level for the substation transformers and the maximum sound power level and octave band data for the turbine type(s) 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 the noise from turbines and substation transformers) will not exceed the maximum allowable noise level at any potentially-affected noise receptor. The analysis must also demonstrate that the facility would meet the ambient degradation test at the appropriate measurement point for potentially-affected noise sensitive properties, or that the certificate holder has obtained the noise waiver described in Condition 12.2.d for each noise-sensitive property where the ambient degradation standard cannot be met.
  - d. For each noise-sensitive property where the certificate holder relies on a noise waiver to demonstrate compliance with OAR 340-035-0035(1)(b)(B)(iii)(III), a copy of the a 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 L10 and L50 by more than 10 dBA at the appropriate measurement point. The legally-effective easement or real covenant must meet all of the following criteria:
    - i. Include a legal description of the burdened property (the noise sensitive property);
    - ii. Be recorded in the real property records of the county;
    - iii. Expressly benefit the certificate holder;
    - iv. Expressly run with the land and bind all future owners, lessees or holders of any interest in the burdened property; and
    - v. Not be subject to revocation without the certificate holder's written approval.

[Final Order VI.A.2.2]

1 12.3. During operation, the certificate holder shall maintain a complaint response system to  
2 address noise complaints. The certificate holder shall notify the Department within 15  
3 days of receiving a complaint about noise from the facility. The notification should  
4 include, but is not limited to, the date the complaint was received, the nature of the  
5 complaint, the complainant's contact information, the location of the affected property,  
6 and any actions taken, or planned to be taken, by the certificate holder to address the  
7 complaint.

8 [Final Order VI.A.2.3]  
9

10 12.4. During operations, the certificate holder shall:

11 a. Upon written notification from the Department, ~~the certificate holder will~~ monitor and  
12 record the actual statistical noise levels ~~during operations~~ to verify that ~~the certificate~~  
13 ~~holder is operating~~ the facility is in compliance with the noise control regulations. The  
14 monitoring plan must be reviewed and approved by the Department prior to  
15 implementation. The cost of such monitoring, if required, will be borne by the  
16 certificate holder.

17 a.b. If the results of the pre-construction final noise analysis submitted per Condition 12.2  
18 identify that modeled noise levels are predicted to be within 1 dBA of the ambient  
19 degradation threshold (10 dBA) for noise sensitive properties that have not agreed to a  
20 noise waiver with the certificate holder, or within 1 dBA of the maximum allowable  
21 noise level (50 dBA) for any noise sensitive property, the certificate holder shall  
22 monitor and record actual statistical noise levels during Year 1 of operations to verify  
23 that the certificate holder is operating the facility in compliance with the noise control  
24 regulations. The monitoring plan must be reviewed and approved by the Department  
25 prior to implementation.

26 c. If the ambient degradation threshold (10 dBA) at noise sensitive properties that have  
27 not agreed to a noise waiver with the certificate holder, or maximum allowable noise  
28 level (50 dBA) at any noise sensitive property is measured at any noise sensitive  
29 property during monitoring conducted to satisfy (a) or (b) of this condition, the  
30 certificate holder shall submit to the Department its mitigation proposal demonstrating  
31 the measures to be utilized to lower noise levels and achieve compliance with the  
32 applicable noise standard. The mitigation proposal shall be reviewed and approved by  
33 the Department.

34 [Final Order VI.A.2.4; AMD4]  
35



### 13.0. MONITORING AND REPORTING REQUIREMENTS - GENERAL

13.1. In addition to monitoring and reporting requirements elsewhere in this Site Certificate, the certificate holder shall also report according to the following requirements:

a. General reporting obligation for energy facilities under construction or operating:

- i. Within six months after beginning construction, and every six months thereafter during construction of the energy facility and related or supporting facilities, the certificate holder shall submit a semiannual construction progress report to the Department of Energy. In each construction progress report, the certificate holder shall describe any significant changes to major milestones for construction. The certificate holder shall include such information related to construction as specified in the site certificate. When the reporting date coincides, the certificate holder may include the construction progress report within the annual report described in Condition 13.1.b.
- ii. By April 30 of each year after beginning construction, the certificate holder shall submit an annual report to the Department addressing the subjects listed in Condition 13.1.b. The Council Secretary and the certificate holder may, by mutual agreement, change the reporting date.
- iii. To the extent that information required by Condition 13.1.b is contained in reports the certificate holder submits to other state, federal or local agencies, the certificate holder may submit excerpts from such other reports to satisfy this rule. The Council reserves the right to request full copies of such excerpted reports.

[Final Order VII.4.a] [OAR 345-026-0080(1)]

b. In the annual report, the certificate holder shall include the following information for the calendar year preceding the date of the report:

- i. Facility Status: An overview of site conditions, the status of facilities under construction, and a summary of the operating experience of facilities that are in operation. In this section of the annual report, the certificate holder shall describe any unusual events, such as earthquakes, extraordinary windstorms, major accidents or the like that occurred during the year and that had a significant adverse impact on the facility.
- ii. Reliability and Efficiency of Power Production: For electric power plants, the plant availability and capacity factors for the reporting year. The certificate holder shall describe any equipment failures or plant breakdowns that had a significant impact on those factors and shall describe any actions taken to prevent the recurrence of such problems.
- iii. Status of Surety Information: Documentation demonstrating that bonds or letters of credit as described in the site certificate are in full force and effect and will remain in full force and effect for the term of the next reporting period.
- iv. Monitoring Report: A list and description of all significant monitoring and mitigation activities performed during the previous year in accordance with site certificate terms and conditions, a summary of the results of those activities and a discussion of any significant changes to any monitoring or

- mitigation program, including the reason for any such changes.
- v. Compliance Report: A description of all instances of noncompliance with a site certificate condition. For ease of review, the certificate holder shall, in this section of the report, use numbered subparagraphs corresponding to the applicable sections of the site certificate.
- vi. Facility Modification Report: A summary of changes to the facility that the certificate holder has determined do not require a site certificate amendment in accordance with OAR 345-027-0050.

[Final Order VII.4.b] [OAR 345-026-0080(b)]

- 13.2. The certificate holder and the Department of Energy shall exchange copies of all correspondence or summaries of correspondence related to compliance with statutes, rules and local ordinances on which the Council determined compliance, except for material withheld from public disclosure under state or federal law or under Council rules. The certificate holder may submit abstracts of reports in place of full reports; however, the certificate holder shall provide full copies of abstracted reports and any summarized correspondence at the request of the Department.

[Final Order VII.5] [OAR 345-026-0105]

- 13.3. The following general monitoring conditions apply:
- The certificate holder shall consult with affected state agencies, local governments and tribes and shall develop specific monitoring programs for impacts to resources protected by the standards of Divisions 22 and 24 of OAR Chapter 345 and resources addressed by applicable statutes, administrative rules and local ordinances. The certificate holder must submit the monitoring programs to the Department of Energy and receive Department approval before beginning construction or, as appropriate, operation of the facility.
  - The certificate holder shall implement the approved monitoring programs described in Condition 13.3.a and monitoring programs required by permitting agencies and local governments.
  - For each monitoring program described in Conditions 13.3.a and 13.3.b, the certificate holder shall have quality assurance measures approved by the Department before beginning construction or, as appropriate, before beginning commercial operation.
  - 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.

[Final Order VII.2] [Mandatory Condition OAR 345-025-0006 (6)]

## 14.0. RETIREMENT AND FINANCIAL ASSURANCE

- 14.1. Before beginning construction, the certificate holder shall submit to the State of Oregon through the Council a bond or letter of credit in the amount described herein naming the State of Oregon, acting by and through the Council, as beneficiary or payee. The initial bond or letter of credit amount is either \$~~6.965~~ 12.019 million (in ~~3<sup>rd</sup> Quarter 2010~~ 4<sup>th</sup> Quarter 2018 dollars), to be adjusted to the date of issuance as described in (b), or the amount determined as described in Condition 14.1.a below. The certificate holder shall adjust the amount of the bond or letter of credit on an annual basis thereafter as described in Condition 14.1.b.
- a. The certificate holder may adjust the amount of the bond or letter of credit based on the final design configuration of the facility and turbine types selected, by applying the unit costs and general costs presented in Table 3 of the Final Order on Amendment 4. Any revision to the restoration costs should be adjusted to the date of issuance as described in Condition 14.1.b, and is subject to review and approval by the Department.
  - b. The certificate holder shall adjust the amount of the bond or letter of credit, using the following calculation and subject to approval by the Department:
    - i. Adjust the Subtotal component of the bond or letter of credit amount (expressed in ~~3<sup>rd</sup> Quarter 2010~~ 4<sup>th</sup> Quarter 2018 dollars) 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 (the "Index") and using the ~~3<sup>rd</sup> Quarter 2010~~ 4<sup>th</sup> 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 ~~3<sup>rd</sup> Quarter 2010~~ 4<sup>th</sup> Quarter 2018 dollars to present value.
    - ii. Add 1 percent of the adjusted Subtotal (i) for the adjusted performance bond amount to determine the adjusted Gross Cost.
    - iii. Add 10 percent of the adjusted Gross Cost (ii) for the adjusted administration and project management costs and 10 percent of the adjusted Gross Cost (ii) for the adjusted future developments contingency.
    - iv. Add the adjusted Gross Cost (ii) to the sum of the percentages (iii) and round the resulting total to the nearest \$1,000 to determine the adjusted financial assurance amount.
  - c. The certificate holder shall use a form of bond or letter of credit approved by the Council.
  - d. The certificate holder shall use an issuer of the bond or letter of credit approved by the Council.
  - e. The certificate holder shall describe the status of the bond or letter of credit in the annual report submitted to the Council required by Condition 13.1.b.
  - f. The bond or letter of credit shall not be subject to revocation or reduction before retirement of the facility site.
- [Final Order IV.F.2.1; AMD4] [Mandatory Condition OAR 345-025-0006 (8)]

- 1  
2 14.2. If the certificate holder elects to use a bond to meet the requirements of Condition 14.1,  
3 the certificate holder shall ensure that the surety is obligated to comply with the  
4 requirements of applicable statutes, Council rules and this site certificate when the  
5 surety exercises any legal or contractual right it may have to assume construction,  
6 operation or retirement of the energy facility. The certificate holder shall also ensure  
7 that the surety is obligated to notify the Council that it is exercising such rights and to  
8 obtain any Council approvals required by applicable statutes, Council rules and this site  
9 certificate before the surety commences any activity to complete construction, operate  
10 or retire the energy facility.  
11 [Final Order IV.F.2.2]  
12
- 13 14.3. The certificate holder shall prevent the development of any conditions on the site that  
14 would preclude restoration of the site to a useful, non-hazardous condition to the extent  
15 that prevention of such site conditions is within the control of the certificate holder.  
16 [Final Order IV.F.2.3] [Mandatory Condition OAR 345-025-0006 (7)]  
17
- 18 14.4. The certificate holder must retire the facility in accordance with a retirement plan  
19 approved by the Council if the certificate holder permanently ceases construction or  
20 operation of the facility. The retirement plan must describe the activities necessary to  
21 restore the site to a useful, non-hazardous condition, as described in OAR 345-027-  
22 0110(5). After Council approval of the plan, the certificate holder must obtain the  
23 necessary authorization from the appropriate regulatory agencies to proceed with  
24 restoration of the site.  
25 [Final Order IV.F.2.4] [Mandatory Condition OAR 345-025-0006 (9)]  
26
- 27 14.5. The certificate holder is obligated to retire the facility upon permanent cessation of  
28 construction or operation. If the Council finds that the certificate holder has  
29 permanently ceased construction or operation of the facility without retiring the facility  
30 according to a final retirement plan approved by the Council, as described in OAR 345-  
31 027-0110, the Council shall notify the certificate holder and request that the certificate  
32 holder submit a proposed final retirement plan to the Department within a reasonable  
33 time not to exceed 90 days. If the certificate holder does not submit a proposed final  
34 retirement plan by the specified date, the Council may direct the Department to prepare  
35 a proposed final retirement plan for the Council's approval.  
36 [Final Order IV.F.2.5] [Mandatory Condition OAR 345-025-0006 (16)]  
37
- 38 14.6. Upon the Council's approval of the final retirement plan, the Council may draw on the  
39 bond or letter of credit submitted per the requirements of Condition 6.1 to restore the  
40 site to a useful, non-hazardous condition according to the final retirement plan, in  
41 addition to any penalties the Council may impose under OAR Chapter 345, Division 29.  
42 If the amount of the bond or letter of credit is insufficient to pay the actual cost of  
43 retirement, the certificate holder shall pay any additional cost necessary to restore the  
44 site to a useful, non-hazardous condition. After completion of site restoration, the  
45 Council shall issue an order to terminate the site certificate if the Council finds that the  
46 facility has been retired according to the approved final retirement plan.

1 [Final Order IV.F.2.6] [Mandatory Condition OAR 345-025-0006 (16)]  
2

- 3 14.7. At least 90 days prior to beginning construction (unless otherwise agreed to by the  
4 Department), the certificate holder shall submit to the Department, a compliance plan  
5 that documents and demonstrates completed actions or actions to be completed to  
6 satisfy the requirements of all terms and conditions of the amended site certificate and  
7 applicable statutes and rules. Following receipt of the site certificate or an amended site  
8 certificate, t~~The certificate holder shall implement a~~the plan that verifies compliance  
9 with all site certificate terms and conditions and applicable statutes and rules. As a part  
10 of the compliance plan, to verify compliance with the requirement to begin construction  
11 by the date specified in the site certificate, the certificate holder shall report promptly to  
12 the Department of Energy when construction begins. Construction is defined in OAR  
13 345-001-0010. In reporting the beginning of construction, the certificate holder shall  
14 describe all work on the site performed before beginning construction, including work  
15 performed before the Council issued the site certificate, and shall state the cost of that  
16 work. For the purpose of this exhibit, “work on the site” means any work within a site  
17 or corridor, other than surveying, exploration or other activities to define or characterize  
18 the site or corridor. The certificate holder shall document the compliance plan and  
19 maintain it for inspection by the Department or the Council.  
20 [Final Order VII.3; AMD4] [OAR 345-026-0048]  
21  
22

1 **15.0. SUCCESSORS AND ASSIGNS**

2  
3 To transfer this amended site certificate or any portion thereof or to assign or dispose of it in any  
4 other manner, directly or indirectly, the certificate holder shall comply with OAR 345-027-0100.  
5

6 **16.0. SEVERABILITY AND CONSTRUCTION**

7  
8 If any provision of this agreement and amended site certificate is declared by a court to be illegal  
9 or in conflict with any law, the validity of the remaining terms and conditions shall not be  
10 affected, and the rights and obligations of the parties shall be construed and enforced as if the  
11 agreement and certificate did not contain the particular provision held to be invalid.  
12

13 **17.0. GOVERNING LAW AND FORUM**

14  
15 This amended site certificate shall be governed by the laws of the State of Oregon. Any litigation  
16 or arbitration arising out of this agreement shall be conducted in an appropriate forum in Oregon.  
17

18 **18.0. EXECUTION**

19  
20 This amended site certificate may be executed in counterparts and will become effective upon  
21 signature by the Chair of the Energy Facility Siting Council and the authorized representative of  
22 the certificate holder.  
23

24 **IN WITNESS THEREOF**, this amended site certificate has been executed by the State of  
25 Oregon, acting by and through its Energy Facility Siting Council, and by Summit Ridge Wind,  
26 LLC.  
27

28 ENERGY FACILITY SITING COUNCIL

Summit Ridge Wind, LLC

29  
30  
31 By: \_\_\_\_\_  
32 Barry Beyeler, Chair  
33 Oregon Energy Facility Siting Council  
34

By: \_\_\_\_\_ [Print Name]  
Summit Ridge Wind, LLC

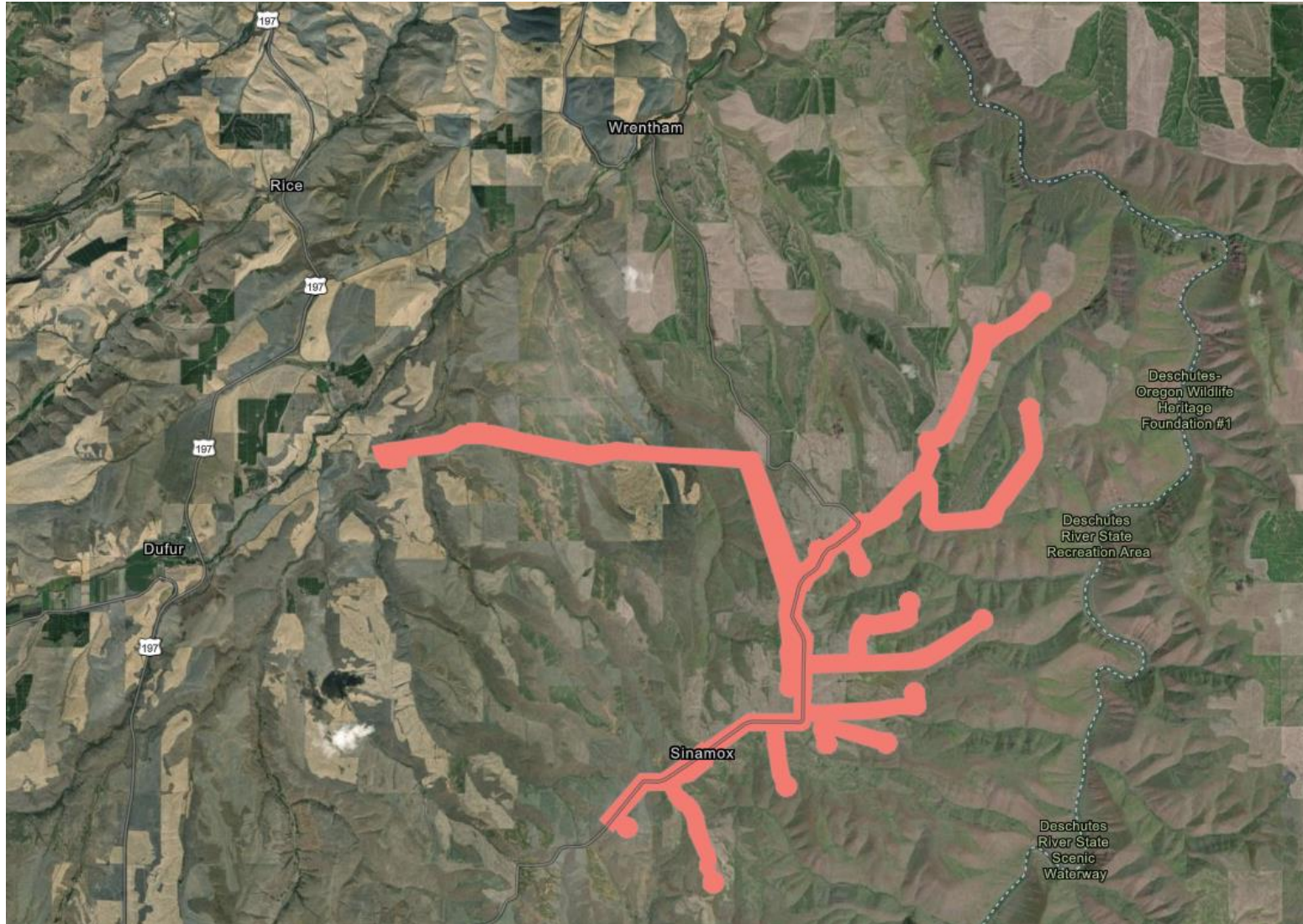
35 Date: \_\_\_\_\_

Date: \_\_\_\_\_



1 **Figure 1: Site Boundary**

2



3





**Attachment B: Reviewing Agency Comments on Preliminary Request for Amendment 4**

Attachment B: pRFA4 Reviewing Agency Comment Index		
Document ID	Commenter/Reviewing Agency	Date Comment Received
SRWAMD4Doc6	Sarah Reif; Oregon Department of Fish and Wildlife	10/03/2018
SRWAMD4Doc6-1	Jeremy Thompson; Oregon Department of Fish and Wildlife	11/28/2018
SRWAMD4Doc7	John Pouley; Oregon State Historic Preservation Office	10/08/2018
SRWAMD4Doc8	Commissioners; Wasco County Board of Commissioners	10/18/2018
SRWAMD4Doc8-1	Angie Brewer; Wasco County Planning Department	1/2/2019
SRWAMD4Doc8-2	Angie Brewer/ Brian Manning; Wasco County Planning Department	11/06/2018
SRWAMD4Doc9	Brian Manning; Wasco County Planning Department	11/06/2018
SRWAMD4Doc11	Yumei Wang; Department of Geologic and Mineral Industries	11/14/2018
SRWAMD4Doc11-1	Yumei Wang; Department of Geologic and Mineral Industries	12/21/2018
SRWAMD4Doc11-2	Yumei Wang; Department of Geologic and Mineral Industries	12/26/2018
SRWAMD4Doc12	Christian Nauer; Confederated Tribes of the Warm Springs Reservation of Oregon	11/19/2018

## MAY Luke \* ODOE

---

**From:** Sarah J Reif <Sarah.J.Reif@state.or.us>  
**Sent:** Wednesday, October 03, 2018 11:18 AM  
**To:** MAY Luke \* ODOE; ESTERSON Sarah \* ODOE  
**Cc:** THOMPSON Jeremy L  
**Subject:** RE: Summit Ridge wind facility, request for comment from ODFW

Luke,

In reviewing other HMPs for other EFSC projects, it does not appear that we have ever required much more of a habitat description than what NWC included in the Summit Ridge HMP. While this might be something I would like to improve upon in the future, I'll limit my current recommendations to the following:

- We need to see the burn perimeter to know whether or not the impact areas and the mitigation areas burned. If the impact area did not burn, but the mitigation areas did burn, then we need to revisit whether these sites are appropriate offsets for this project. I recommend they overlay the burn perimeter on the map you attached to your original email inquiry.
- Refresh the desktop assessment of habitat category and habitat type
- If the mitigation sites burned, then a field visit (ideally this would be done during the next growing season, but should at least happen before we approve the HMP that identifies these sites) to collect the following information:
  - Photographs of representative sites within the mitigation areas
  - Qualitative descriptions of the dominant plant species, presence of non-natives and ocular estimates of percent cover by species
  - Qualitative descriptions of burn severity
- As for monitoring of the mitigation area, I would recommend that a more rigorous vegetation sampling effort take place once the project is underway, so as to establish baseline condition. That should follow our recommendations from our temp impacts white paper, which leaves room for the applicant to propose a scientifically valid and quantitative method, to be approved by ODOE and ODFW.

Hope that helps.

Sarah Reif  
Office: 503-947-6082  
Cell: 503-991-3587

---

**From:** Sarah J Reif  
**Sent:** Tuesday, October 02, 2018 9:42 PM  
**To:** 'MAY Luke \* ODOE' <Luke.May@oregon.gov>; ESTERSON Sarah \* ODOE <Sarah.Esterson@oregon.gov>  
**Cc:** THOMPSON Jeremy L <Jeremy.L.Thompson@state.or.us>  
**Subject:** RE: Summit Ridge wind facility, request for comment from ODFW

Luke,

Comments from Jeremy and me are embedded below, in red.

Sarah Reif  
Office: 503-947-6082

**From:** MAY Luke \* ODOE [<mailto:Luke.May@oregon.gov>]  
**Sent:** Tuesday, September 18, 2018 11:26 AM  
**To:** THOMPSON Jeremy L <[Jeremy.L.Thompson@state.or.us](mailto:Jeremy.L.Thompson@state.or.us)>; REIF Sarah J <[Sarah.J.Reif@state.or.us](mailto:Sarah.J.Reif@state.or.us)>  
**Cc:** ESTERSON Sarah \* ODOE <[Sarah.Esterson@oregon.gov](mailto:Sarah.Esterson@oregon.gov)>  
**Subject:** Summit Ridge wind facility, request for comment from ODFW

Hello Sarah and Jeremy,

ODOE received a preliminary Request for Amendment 4 of the Summit Ridge Wind Farm site certificate on August 16, 2018 (see URL below). The amendment request would extend the construction commencement and completion deadlines from August 19, 2018 and August 19, 2021 to August 19, 2020 and August 19, 2023, respectively. For amendments requesting to extend construction deadlines, ODOE evaluates whether there have been “changes in fact or law” since the last site certificate was issued to determine whether the facility would continue to satisfy requirements of Council standard and other applicable laws and regulations. Based on this scope of review, we would like to discuss the following with ODFW:

<https://www.oregon.gov/energy/facilities-safety/facilities/Pages/SRW.aspx>

**Comment 1:**

In 2015, during review of Request for Amendment 2, ODFW recommended that the HMP be amended to account for ODFW’s change in policy regarding big game winter range. Based on this comment, the HMP was revised. Previously identified Cat 3 and 4 habitat was then categorized as Cat 2 (big game) with an offset ratio of >1:1. It does not appear that the habitat mitigation sites, proposed by the previous certificate holder and reviewed by ODFW in 2010, were re-evaluated with the change in Cat 2 (big game) habitat. We would like to discuss/review the proposed habitat mitigation sites to ensure that, based on the Cat 2 (big game) habitat, the sites continue to represent reasonable mitigation sites.

Note: ODOE intends to require the certificate holder to conduct a habitat assessment of the mitigation sites, prior to approval of the sites, as a pre-construction condition.

Thank you for recognizing the need for a new habitat assessment of the mitigation sites, we concur with this requirement. The mitigation sites were all heavily impacted by the fires this summer, so it may be beneficial to reexamine how they proposed to achieve Category 2 habitat on those pieces.

We would like ODFW to comment as to whether the proposed mitigation sites are still acceptable. See our response directly above – we will need to see some sort of habitat assessment to determine whether those mitigation sites are still acceptable, post-fire. It would also be helpful if ODFW could provide insight into some of the criteria that is evaluated when determining the sufficiency of a proposed mitigation site.

Criteria include:

- a quantitative comparison to ensure no net loss (in other words, is it an equivalent or greater acreage) and/or net benefit (is the mitigation area 2:1 or at least larger than the impacted area with a high probability of success in habitat enhancement/restoration)
- ensuring the mitigation site offsets the same habitat categories and roughly the same composition/percentage of habitat types within those categories
- the mitigation site is adequately replacing the functions and values lost (just a qualitative determination made by the District Biologist)
- the mitigation site is not severely impacted by noxious weeds or erosion, or there is no immediate threat of habitat loss/degradation

- the mitigation site will be durable (some sort of conservation easement, fee title, or other legal instrument) for at least the life of the energy facility
- bonus if the mitigation site is connected to public land or a natural area such that wildlife using the mitigation site have the ability to connect to other nearby habitats

- Background on mitigation sites (ASC 2010):
  - The Application for Site Certificate states: “Two proposed mitigation parcel sites were reviewed on site with two members of ODFW staff and representatives of Northwest Wildlife Consultants and the Applicant on Tuesday, May 4, 2010. These sites are identified as site no. 2 and site no. 4 in Figure 1 of the Summit Ridge Habitat Mitigation Plan (Attachment P-6). These parcels were reviewed as conservation, habitat restoration, and enhancement sites to offset the direct temporary (where needed) and permanent habitat impacts resulting from the Facility's installation in order to meet or exceed the Oregon Habitat Standards. These potential site opportunities were offered by an interested project landowner. As a result of that site visit, ODFW responded with their evaluation of the sites in a letter dated May 24, 2010 (Attachment P-8). Applicant is in agreement with the recommendations of this letter, and will undertake the improvements identified in establishing these as mitigation sites. Applicant intends to enter into a Conservation Easement with the landowner of these sites for the duration of the Facility.”
  - Note: I have attached the relevant pages relating to the proposed mitigation sites to this e-mail.

Jeremy has left on a trip so I can't ask him, but what I don't know (Sarah R. here) is did both the project footprint and the mitigation sites burn? Did they both burn at similar severity? Do they both now face the same risk of noxious weed invasion? What plans does the applicant have for fire rehab of burned areas?

#### **Comment 2:**

Currently, the mitigation ratio included in the HMP for Cat 2 (big game) is >1:1, and for Cat 2 (traditional) is 2:1. Could ODFW describe why a mitigation ratio of >1:1 is risky or insufficient in meeting the Cat 2 habitat net benefit obligation?

The level of certainty that the proposed mitigation will be successful is a major determinant of the mitigation ratio. If the proposed mitigation fails or does not meet expectations, then the project will not meet the EFSC Fish and Wildlife Habitat Standard and the project proponent will be responsible for providing additional mitigation that is successful. The project proponent can build in greater certainty by upping mitigation ratios.

#### **Comment 3:**

The HMP describes enhancement actions as: fencing out livestock, modification of livestock grazing, weed control, revegetation with native plants, fire control. Does ODFW have recommendations for any other enhancement actions that might provide more specific benefit to big game or big game winter range, or does ODFW consider these actions sufficient?

We would not recommend any additional actions, but it would be beneficial to flesh these actions out further. For example, are they really planning to fence out livestock? Or just modify the grazing regime? And modify to what – what is the current grazing management scheme? How would they modify that scheme to improve habitat? (Reduce AUMs by how much? Or shorten the grazing period to what?). What strategies will they use for revegetation, what plant lists, and where within the mitigation area do they feel this is needed? How about a map of proposed actions?

Note: ODOE intends to update the revised HMP (see attached) to include sufficient details on enhancement actions, success criteria and monitoring. The draft amended HMP will be provided for ODFW review and comment.

We would certainly support a more rigorous monitoring plan, with more quantitative success criteria than what we previously reviewed and agreed with for Summit Ridge. We have learned from other EFSC projects since Summit Ridge was originally reviewed and approved, in particular we have learned that the more specific and quantitative the monitoring plan and success criteria, the easier it is for the applicant to report trend and the easier it is for reviewing

agencies to provide feedback. You might find it helpful to borrow some of the monitoring and success criteria recommendations from our draft white paper on temporary impacts/revegetation that we shared a couple months ago.

Would you have an opportunity sometime within the next week or so to discuss these? Thanks for all the help!

Luke May  
Utility Energy Analyst  
Oregon Department of Energy  
550 Capitol St NE, 1<sup>st</sup> Floor  
Salem, OR 97301  
P:(503) 373-7115

[Oregon.gov/energy](http://Oregon.gov/energy)







Kate Brown, Governor

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**Department of Fish and Wildlife**

Mid-Columbia Field Office  
3701 West 13<sup>th</sup> Street  
The Dalles, OR 97058  
(541) 296-4628  
FAX (541) 298-4993



November 28, 2018

Luke May  
Oregon Department of Energy  
550 Capitol Street NE  
Salem, OR 97301

RE: Oregon Department of Fish and Wildlife review of Summit Ridge request for Amendment #4

Dear Mr. May:

The Oregon Department of Energy (ODOE) has requested review from the Oregon Department of Fish and Wildlife (Department) on the August 16, 2018 Amendment to Site Certificate proposal for the proposed Summit Ridge Wind Project. This Letter contains: (1) Department contact information for the project; and (2) the Department's review comments and recommendations on the proposed amendment.

**A. Contacts**

I will remain the primary Department contact person for the Energy Facility Siting Council (EFSC) permitting process. My contact information is: Jeremy Thompson, 3701 W 13<sup>th</sup> St. The Dalles, OR 97058. My phone number is (541) 296-4628. Please also copy Sarah Reif, the Department's Energy Program Coordinator: Sarah Reif, 4034 Fairview Industrial Drive SE, Salem, OR 97302; Office phone number (503) 947-6082.

**B. Comments on the Application**

General Comments

Please find below a listing of the most applicable statutes, administrative rules and policies administered by the Department that would pertain to the siting of this proposed facility. The Department will review and make recommendations for the proposed project based on the following applicable statutes and rules.

**Oregon Revised Statutes (ORS)**

- ORS 496.012 Wildlife Policy
- ORS 506.036 Protection and Propagation of Fish
- ORS 496.171 through 496.192 Threatened and Endangered Wildlife and Fish Species. A listing of State and Federal threatened, endangered and candidate species can be found on the Department's website at:  
[http://www.dfw.state.or.us/wildlife/diversity/species/threatened\\_endangered\\_candidate\\_list.asp](http://www.dfw.state.or.us/wildlife/diversity/species/threatened_endangered_candidate_list.asp)
- ORS 498.301 through 498.346 Screening and By-pass devices for Water Diversions or Obstructions
- ORS 506.109 Food Fish Management Policy
- ORS 509-140 Placing Explosives in Water
- ORS 509.580 through 509.910 Fish Passage; Fishways; Screening Devices. A listing of requirements under the Department's Fish Passage Program can be found on the Department's website at <http://www.dfw.state.or.us/fish/passage/>

### **Oregon Administrative Rules (OAR)**

- OAR Chapter 635, Division 100 provides authority for adoption of the State sensitive species list and the Wildlife Diversity Plan, and contains the State list of threatened and endangered wildlife and fish species. A current list of State sensitive species can be found on the Department's website at:  
[http://www.dfw.state.or.us/wildlife/diversity/species/docs/SSL\\_by\\_category.pdf](http://www.dfw.state.or.us/wildlife/diversity/species/docs/SSL_by_category.pdf)
- OAR Chapter 635, Division 415 Fish and Wildlife Habitat Mitigation Policy can be found on the Department's website at:  
[http://www.dfw.state.or.us/lands/mitigation\\_policy.asp](http://www.dfw.state.or.us/lands/mitigation_policy.asp) describes six habitat categories and establishes mitigation goals and standards for each wildlife habitat ranging from Habitat Category 1 (irreplaceable, essential, limited) to Habitat Category 6 (non-habitat)
- The Mitigation Policy goal for Habitat Category 1 is avoidance of impacts through development alternatives ultimately resulting in a Department recommendation of no authorization of the proposed development action if impacts cannot be avoided. Habitat Categories 2-4 are essential or important for fish and wildlife, but not irreplaceable habitats. Habitat Category 5 is not essential or important habitat for fish and wildlife, but has a high restoration potential. The application for a site certificate should identify the appropriate habitat categorization for all affected areas of the proposed project on mapping; provide basis for each habitat category selection; and provide an appropriate mitigation plan; all subject to ODOE and the Department's

review and comment. ODOE has adopted this rule into OAR 345-022-0060 as an energy facility siting standard for Applicants to meet in order to obtain a site certificate.

- The Department also provides technical review and recommendations on compliance with Oregon EFSC rules, particularly OAR 345-02100010(1) (p) and (q) and 345-22-040, 060 and 070.
- The Department also recommends project consistency with the Oregon Columbia Plateau Ecoregion Wind Energy Siting and Permitting Guidelines that were established in conjunction with multiple state, federal and industry partners. The intent of these guidelines is to create a balance between the development of renewable energy and environmental protection.

### **Department Recommendations**

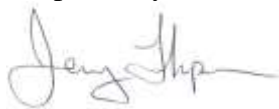
It is the Department's understanding that the Habitat Mitigation and Revegetation Plan (HMRP), as outlined in the current Site Certificate, will be reviewed and updated prior to project construction. At that time, the Department requests the opportunity to recommend changes based on the current best available science. The original site application for this project was received over ten years ago, and recommendations have evolved based on new science as well as ODFW's experience with operational projects. Specifically, the Department would like to address standards used to offset both temporary and permanent impacts to habitats in Categories 2-4, as well as classification of those habitats.

ODFW also requests the ability to suggest modifications to locations for proposed mitigation parcels at the time of construction. The majority of the landscape within the project boundary, as well as proposed mitigation parcels, were impacted by fire this last summer. There is a large effort currently underway to mitigate the impacts from those fires to the habitats present. With the proposed start of construction still unknown, ODFW is concerned that current proposed mitigation parcels may no longer meet the original intent for mitigation as outlined in the original mitigation plan.

The Department requests that ODOE confirm that all other conditions regarding Threatened and Endangered Species, as well as Fish and Wildlife Habitat be carried forward into Amendment #4.

The Department appreciates the opportunity to comment on this application and looks forward to working with ODOE and the Applicant.

Respectfully,

A handwritten signature in dark ink, appearing to read "Jeremy Thompson", is written over a light gray circular background.

Jeremy Thompson

Mid-Columbia District Wildlife Biologist

Cc: Jon Germond, Salem  
Sarah Reif, Salem  
Michael Harrington, Bend  
Simon Wray, Bend  
Applicant



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)



October 8, 2018

Mr. Luke May  
Oregon Dept of Energy  
550 Capitol St NE  
1st Floor  
Salem, OR 97301

RE: SHPO Case No. 09-1281  
ODOE, Summit Ridge Wind Farm Proj  
NOI for site certification and CRAS Report  
Multiple legals, The Dalles, Wasco County

Dear Mr. May:

Our previous response to the above referenced project remains applicable. A copy is included with this response. The only additional comment is that while the reports suggest there is no federal nexus, if the wind farm *needs* to connect to the federal grid, it may constitute an undertaking. The Advisory Council on Historic Preservation, who are the authors of the 36CFR800 regulations for Section 106 of the National Historic Preservation Act (NHPA) have a web-based document specifically addressing federal nexus issues around windfarm projects (<https://www.achp.gov/digital-library-section-106-landing/what-about-wind-farm-project-triggers-section-106>). In that document, they state:

*...numerous federal agencies have actions (grants or other assistance, permits, leases, or other authorizations) involving applicants that may require compliance with Section 106 for specific wind farm projects. Examples include:*

*The Corps of Engineers provides permits for impacts to the waters of the US pursuant to section 404 of the Clean Water Act and permits for obstructions in navigable waters pursuant to Section 10 of the Rivers and Harbors Act;*

*The Western Area Power Administration and Bonneville Power Administration, which operate in the western portion of the nation, may provide the electrical interconnection between wind farms and the power grids. Accordingly, they may have Section 106 responsibilities depending on a variety of factors. In a number of cases, the key issue is the federal agency's decision whether a particular federal interconnection is a necessity for the otherwise private project to proceed (the "but for" question).*

Aside from restating our previous response and considering the comment on the federal nexus, please be reminded that under state law (ORS 358.905 and ORS 97.74) archaeological sites, objects and human remains are protected on both state public and private lands in Oregon. If any are discovered during construction, all activities should cease immediately until a professional archaeologist can evaluate the discovery, or the tribal position paper on the treatment of human remains is followed (available at the SHPO website:<https://www.oregon.gov/oprd/HCD/ARCH/docs/Tribal%20position%20paper%20on%20Human%20Remains05212018.pdf>). If you have not already done so, be sure to consult with all appropriate Indian tribes regarding your proposed project. If the project has a federal nexus (i.e., federal funding, permitting, or oversight), which is suspected, as referenced above, please coordinate with the appropriate lead federal agency representative regarding compliance with Section 106 of the National Historic Preservation Act (NHPA).



Sincerely,

A handwritten signature in cursive script, reading "John D. Pouley". The signature is written in dark ink and is positioned above the printed contact information.

John Pouley, M.A., RPA  
Assistant State Archaeologist  
(503) 986-0675  
[john.pouley@oregon.gov](mailto:john.pouley@oregon.gov)

cc:



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***Pioneering pathways to prosperity.***

October 17, 2018

Luke May  
Siting Analyst  
Oregon Department of Energy  
550 Capitol St NE, 1<sup>st</sup> Floor  
Salem, OR 97301

Subject: Summit Ridge Windfarm

Dear Mr. May,


Thank you for notifying the County that there has been a request for amendment to the previously approved but not yet constructed, Summit Ridge Windfarm. According the project materials listed on your website<sup>1</sup>, the project still includes up to 72 wind turbines with a peak generating capacity of 194.4 megawatts, located within a site boundary of approximately 11,000 acres, approximately 17 miles southeast of The Dalles and eight miles east of Dufur.

The rules and regulations within the Wasco County Land Use and Development Ordinance pertaining to energy development have not changed since the time of the last evaluation of this project in 2016.

Given this information, Wasco County does not have any concerns associated with the request for amendment. Planning staff should be consulted as needed for technical assistance to evaluate any substantive differences in the application materials.

Thank you,  
Wasco County Board of Commissioners

  
\_\_\_\_\_  
Steven D. Kramer, Chair

  
\_\_\_\_\_  
Scott C. Hege, Vice-Chair

  
\_\_\_\_\_  
Rod L. Runyon, County Commissioner

<sup>1</sup> <https://www.oregon.gov/energy/facilities-safety/facilities/Pages/SRW.aspx>



## MAY Luke \* ODOE

---

**From:** Angie Brewer <angieb@co.wasco.or.us>  
**Sent:** Wednesday, January 02, 2019 9:40 AM  
**To:** MAY Luke \* ODOE  
**Subject:** Fwd: Summit Ridge Wind Project Request for Amendment 4 - wind turbine setbacks

Hi Luke, Happy New Year.

I've had a chance to converse with our staff about your questions. We are not aware of any new infrastructure in the development area. And, as his email states below, Arthur Smith has confirmed that his 2016 response is still accurate. Please note however, pursuant to our Ordinance, Section 19.030(D)(1)(c)(3)(c)(i) we would still want approval of the underlying landowner.

Thank you for the opportunity to participate in this project.

Angie



**Angie Brewer, AICP | Director**  
**PLANNING DEPARTMENT**

[angieb@co.wasco.or.us](mailto:angieb@co.wasco.or.us) | [www.co.wasco.or.us](http://www.co.wasco.or.us)  
541-506-2566 | Fax 541-506-2561  
2705 East Second Street | The Dalles, OR 97058

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*Note: This correspondence does not constitute a Land Use Decision per ORS 197.015. It is informational only and a matter of public record.*

----- Forwarded message -----

**From:** Arthur Smith <[arthurs@co.wasco.or.us](mailto:arthurs@co.wasco.or.us)>  
**Date:** Fri, Dec 28, 2018 at 8:20 AM  
**Subject:** Re: Summit Ridge Wind Project Request for Amendment 4 - wind turbine setbacks  
**To:** Angie Brewer <[angieb@co.wasco.or.us](mailto:angieb@co.wasco.or.us)>

Angie,

The consent I provided in 2016 is still valid. None of those proposed setback distances will impact the existing county road or public right-of-way.

Arthur

On Thu, Dec 27, 2018 at 1:56 PM Angie Brewer <[angieb@co.wasco.or.us](mailto:angieb@co.wasco.or.us)> wrote:

Arthur,  
Please see below. Do you still feel the same as you did about this in 2016? I need to respond to EFSC soon...Thanks :)

A



**Angie Brewer, AICP | Director**  
**PLANNING DEPARTMENT**

[angieb@co.wasco.or.us](mailto:angieb@co.wasco.or.us) | [www.co.wasco.or.us](http://www.co.wasco.or.us)  
541-506-2566 | Fax 541-506-2561  
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----- Forwarded message -----

From: **MAY Luke \* ODOE** <[Luke.May@oregon.gov](mailto:Luke.May@oregon.gov)>

Date: Wed, Dec 26, 2018 at 11:11 AM

Subject: RE: Summit Ridge Wind Project Request for Amendment 4 - wind turbine setbacks

To: Angie Brewer <[angieb@co.wasco.or.us](mailto:angieb@co.wasco.or.us)>

Hi Angie,

Sorry to bug you during the middle of the holidays. If you get a chance, could you comment on these two areas below? Thanks and I hope you are enjoying this time.

-Luke

---

**From:** MAY Luke \* ODOE

**Sent:** Thursday, December 20, 2018 11:21 AM

**To:** 'Angie Brewer' <[angieb@co.wasco.or.us](mailto:angieb@co.wasco.or.us)>

**Subject:** Summit Ridge Wind Project Request for Amendment 4 - wind turbine setbacks

Hi Angie,

As a quick summary - in the RFA2, the Council previously granted a setback variance for 17 turbines. These turbines would be setback at 110% of the tower height as opposed to 150%.

Because there are new noise sensitive receptors, we are evaluating the WCLUDO Section 19.030(D)(1)(c).

Relating to 19.030(D)(1)(c)(3)(c) (i) and (iv) – could you please provide comment on whether:

- The consent provided in 2016 (below) is still valid?
- Is there any new existing infrastructure that the turbines (with setback variance) could impact?

For your reference, I have also provided a screenshot from the Request for Amendment 2, which provides a map of the proposed turbines with reduced setbacks. Please let me know if you need more information or would like to talk on the phone. Thanks again for your help!

-Luke

**From:** Arthur Smith [<mailto:arthurs@co.wasco.or.us>]  
**Sent:** Thursday, April 21, 2016 2:37 PM  
**To:** Steven Ostrowski  
**Cc:** Angie Brewer  
**Subject:** Setback variance - Summit Ridge Wind Farm

Steve,

Thank you for meeting with me and discussing the proposed setback variance for the Summit Ridge wind project. I really appreciate all the information you provided.

3

With regards to Wasco County LUDO, Section 19.030 (D)(1)(c)(3)(c)(1) and acting as the designated representative authority for Wasco County, I am consenting to the requested setback variance of 1.1. This variance will not unduly impair safety on the county roads in the project area and it will not unduly burden any county infrastructure.

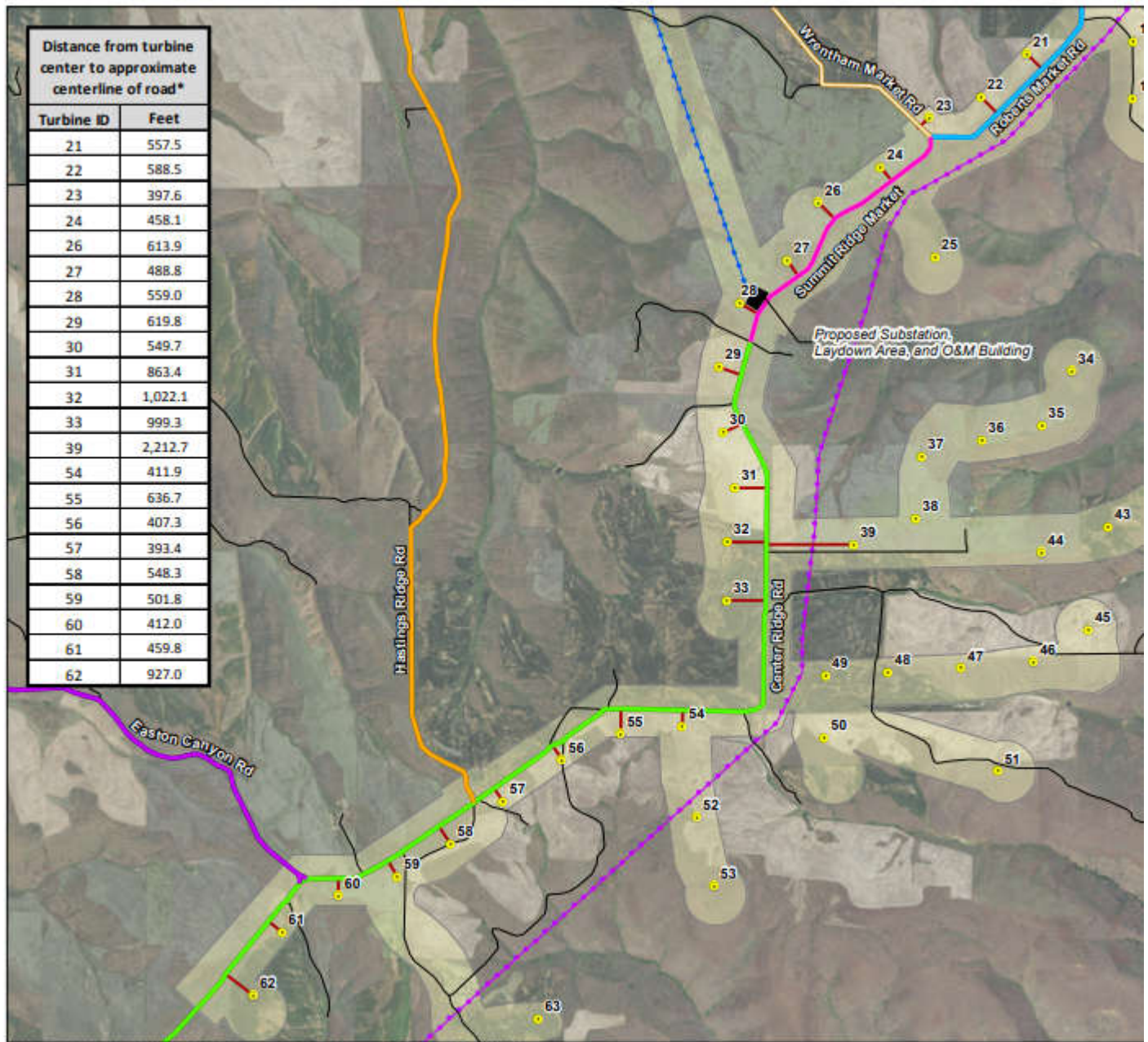
If you have any questions, please feel free to contact me. Thanks.

Arthur

--

**Arthur Smith, Director  
Wasco County Public Works  
541-506-2645**

v



Luke May

Siting Analyst

Oregon Department of Energy  
 550 Capitol St NE, 1<sup>st</sup> Floor  
 Salem, OR 97301  
 P:(503) 373-7115

[Oregon.gov/energy](http://Oregon.gov/energy)



**Arthur Smith | *Director***

**PUBLIC WORKS**

[arthurs@co.wasco.or.us](mailto:arthurs@co.wasco.or.us) | [www.co.wasco.or.us](http://www.co.wasco.or.us)  
541-506-2645 | Fax 541-506-2641  
2705 East 2nd Street | The Dalles, OR 97058

## MAY Luke \* ODOE

---

**From:** Brian Manning <roccobb@gmail.com>  
**Sent:** Tuesday, November 06, 2018 7:38 AM  
**To:** Angie Brewer  
**Cc:** Kelly Howsley-Glover; MAY Luke \* ODOE; Scott Baker  
**Subject:** Re: recreational resources in Wasco County

Angie/Luke,

There are no new recreation facilities in South Wasco County that I am aware of.

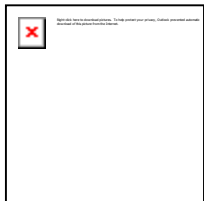
Brian

On Mon, Nov 5, 2018 at 4:32 PM Angie Brewer <[angieb@co.wasco.or.us](mailto:angieb@co.wasco.or.us)> wrote:  
Hi Luke,

Cottonwood Canyon State Park is not located in Wasco County, but I do appreciate the question. There are no new recreation facilities that I'm aware of. In 2016, the South Wasco Parks and Recreation District was formed as a new district to manage public facilities in South Wasco County. I believe they are mostly focused on the recreation opportunities at Pine Hollow Reservoir at this time, which is an existing facility. I've copied Brian Manning, their chair, in the event they have a new facility that I'm not aware of. I've also copied Scott Baker, from the North Wasco County Parks and Recreation District, and our Long Range Planner, Kelly Howsley-Glover, in case she's come across anything in our plan update process that might be relevant.

Brian, Scott and Kelly: Any new recreation facilities in Wasco County developed in the last few years that you can think of?

Thanks,  
Angie



**Angie Brewer, AICP | Director**  
**PLANNING DEPARTMENT**

[angieb@co.wasco.or.us](mailto:angieb@co.wasco.or.us) | [www.co.wasco.or.us](http://www.co.wasco.or.us)  
541-506-2566 | Fax 541-506-2561  
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On Mon, Nov 5, 2018 at 3:19 PM MAY Luke \* ODOE <[Luke.May@oregon.gov](mailto:Luke.May@oregon.gov)> wrote:

Hi Angie,



I am reviewing the Summit Ridge Wind Farm application for construction deadline extension. The certificate holder indicates that there are no new recreational opportunities in Wasco County, and cites the most recent Wasco County Comprehensive Plan (2010). However, it looks like Wasco County added the Cottonwood Canyon State Park after this date. Could you confirm that there are no new parks or recreational opportunities in Wasco County that were added that should be evaluated? Thanks!

-Luke

Luke May

Siting Analyst

Oregon Department of Energy  
[550 Capitol St NE](#), 1<sup>st</sup> Floor  
Salem, OR 97301  
P:(503) 373-7115

[Oregon.gov/energy](http://Oregon.gov/energy)

# **Summit Ridge Wind Power Project Consultation with Oregon Department of Geology and Mineral Industries (DOGAMI)**

**November 14, 2018**

**Skype Call and Meeting in Portland, OR at the DOGAMI office**

**In Attendance** Yumei Wang, P.E. – DOGAMI; Katie Clifford – ODOE; Luke May - ODOE

**On Phone** Derek Price – Pattern Energy; Linnea Fossum – Tetra Tech/Pattern Energy;  
Suzy Cavanagh – Tetra Tech/Pattern Energy

DOGAMI requested that the consultation meeting held on November 14, 2018 be summarized and emailed to DOGAMI and ODOE for review so that we are all on the same page as to what is expected to be analyzed.

## **Project Description and Schedule**

Summit Ridge is a wind energy project in Wasco County that is permitted for 194.4 MW with 72 turbines on approximately 11,000 acres. It was permitted in 2011, has had two amendments, to change turbine types and extend construction deadlines, and another amendment last fall to transfer ownership to Pattern Energy. Pattern has an extensive resume developing wind projects throughout the country. This RFA will further extend the construction deadline to allow Pattern to continue development. No changes to the site boundary and prior certificate under this RFA.

Derek Price (on phone) heads up the Pattern preconstruction group which oversees all engineering, estimating, and support design teams up until construction starts. Pattern has been around for 9 years, prior to that it was Babcock and Brown, Pattern was a subset of that financial firm. The renewables energy group broke away and formed Pattern. Pattern owns and operate about 4,000 MW of wind and solar in US, Canada, Japan, and recently divested some projects in South America. In the U.S. Pattern has 10 operating wind projects in California, Texas, Indiana, New Mexico and Ontario, Canada. Derek has been with Pattern for 5 years. Pattern develops, builds, and operates in communities and gets involved in the local community because they will own and operate the project at the end of the day.

## **Information needed for the RFA**

ODOE requested an overview of Exhibit H and what was done in the first go around in site certificate review. Exhibit H work was done in 2010, DOGAMI consultation was done with Bill Burns. There are different codes and scientific information now and DOGAMI stated that the work needs to be updated to the current codes, new structural codes, and new standards.

### **Studies to be conducted prior to construction**

The final design and geotechnical work doesn't happen until later in the process. There has been no site-specific geotechnical work done yet. A desktop analysis will be conducted for preliminary work and the site-specific studies will be done closer to construction once Pattern is nearing the stages of final design of the wind turbines, roads, etc.

DOGAMI has a Scope of Review for EFSC and will expect to have a site specific geotechnical work done for foundation, geologic hazards, and landslide hazards. What can be done at the desktop level is USGS fault database. Any new energy facility will need a site specific seismic investigation and regional literature search. There are active faults on Mt. Hood (found by DOGAMI). DOGAMI would expect to have faults looked at in the near vicinity. Site specific response analyses, controlling earthquake and design parameters will need to be done. For landslides, DOGAMI considers using Lidar as the base map as standard of practice and wants to make sure Pattern is using the most recent science. Yumei Wang cited some un-named faults in the area and a named fault in the NE and would like those well cited so we know where that information came from. DOGAMI would like the geotechnical report to be appended to Exhibit H.

Derek indicated that what DOGAMI has outlined is what Pattern would do prior to final design:

- 100% site-specific geotechnical analysis along with slope stability analysis.
- 100% Lidar of all of sites where impacts will be, usually in a 1,000-foot corridor.
- To further address the seismic concerns, additional investigative work with the engineering firm will be completed. For example, Pattern has done fault trenching before in California near the San Andreas fault where sight lines were run, and differential settlement was run to assist in microsites wind turbines.

If landslide hazards are identified, DOGAMI would want Pattern to do Lidar analysis that would extend beyond the corridors (ex: ridgetops to bottom of valley). For ground motions, we have Cascadia subduction faults which are offshore and pretty far away. The long-period ground motions can dominate and can well exceed the ground motion response spectrum. Address areas where the site-specific response spectra might be high in the long range. Discuss how you plan to address that with any long-period structures. DOGAMI doesn't know what you plan to do, so please clearly outline what you have done, or what you plan to do at what stage for geotechnical analysis. Identify that these aren't data gaps, but studies that haven't been done yet. Please be explicit, for example, what facilities are you boring near and to what depth.

Pattern can outline that; the wind turbine foundations go to 50 feet or until auger refusal within the footprint of the foundation. Any building structures (substation, O&M buildings), if the design is adjusted (microsited), Pattern will remobilize and do additional borings.

DOGAMI requested to include in these notes into Exhibit H. It isn't just DOGAMI doing consultation, but the public wants to know that the state is moving ahead prudently. DOGAMI would appreciate knowing what code and references Pattern is using. DOGAMI uses the Oregon Structural Specialty

code that refers to the International Building Code (IBC). Please be explicit to other codes too, for example transmission, seismic shaking, National Electric Safety Code, etc.

Pattern has a document of standards that all contractors are required to use. DOGAMI would like that appended to Exhibit H. This information will be documented in these notes and in the final amendment application.

ODOE requested other than revising existing Exhibit H, include in revised requested amendment (updated RFA). Include in updated RFA long-period ground motion hazards with respect to fault hazards, Lidar studies and what will be done in the future. Exhibit H was vague and gave examples; we have discussed types of investigation that would be appropriate and those can be included.

That will be in the notes and we can provide the additional information for the standards.

DOGAMI discussed disaster resilience and future climate:

Disaster resilience – Pattern says that the project will be designed to code. DOGAMI expects that with any energy project and is interested in knowing if you consider designing above code and what measures are considered above code. For example, measures to speed recovery of operations after a disaster.

Pattern asked if there is a specific concern DOGAMI has since disaster resiliency and/or future climate events are vague. DOGAMI will share the DOGAMI Scope of Review for EFSC document which gives examples. State codes, scientific information, and make it transparent to public. Make sure that for energy facilities that provide electricity to communities, that the electricity providers cannot take a big hit and be out because DOGAMI wants to make sure that the electricity can be delivered. In Oregon the Cascadia Subduction zone fault is the biggest hazard. DOGAMI is making an effort statewide to make sure Oregon is resilient to natural disasters. Example, long electrical blackouts and that new facilities don't compound the problem but help out in a disaster. Old facilities will have issues in disasters, but DOGAMI expects newer facilities to help out in a disaster. DOGAMI discussed nearby Mt. Hood and potential issues with channel migration, that is something DOGAMI wants considered for transmission lines in areas of erosive geology with glacial soils.

Future climate – DOGAMI wants to make sure the facility takes into account climate today and future climate. We are seeing more drought and fires and wind and snow patterns changing. DOGAMI is not asking for detailed studies of climate conditions at the project site, but to know that Pattern is aware of them and how they are being taken into account.

ODOE discussed information related to disaster resilience and climate change. Division 21 requires an explanation of how the applicant will design, engineer, construct and operate the facility to integrate disaster resilience design to ensure recovery of operations after major disasters. In addition, it requires an assessment of future climate conditions for the expected life span of the proposed facility and the potential impacts of those conditions on the proposed facility. Need to discuss how changing climate could impact the facility. The RFA states that the project will be "...designed to withstand," we need to know the "how" it will be designed.

Yumei suggested to look at wind maps in the code and state that you are designing to above what you have to address anyway. There may be channels in the area where you could get streambank erosion and channel migration, maybe there is not hazard there, but DOGAMI wants you to evaluate and address if it is a hazard now or in 50-years from now and explain the design life of the facility. For example, BPA assumes infinite life on their transmission lines. If Pattern is doing the same, tell us how you are designing for it, that would cover these topics.

Pattern will describe the design life and the codes. For wind projects, Pattern builds in windy areas. An example of designing above code is for our transmission lines; Pattern designs under NESC heavy-case – typically designs for 1.5 inches of ice and very high winds, both which exceed the requirement. This example is from experience designing to code, so Pattern designs above code regularly.

DOGAMI stated that there have been conditions in eastern Oregon and western Idaho where power companies have had failures because the conditions exceeded the codes that were designed to.

### **Next Steps**

The final summary of consultation should be included as an attachment to Exhibit H. Geotechnical report(s) for any studies that have been completed at the time of ASC submittal should also be attached to Exhibit H.

## MAY Luke \* ODOE

---

**From:** WANG Yumei \* DGMI  
**Sent:** Friday, December 21, 2018 12:27 PM  
**To:** MAY Luke \* ODOE  
**Cc:** WANG Yumei \* DGMI  
**Subject:** RE: Summit Ridge Wind DOGAMI consultation notes

Hi Luke,

Nice chatting!

As discussed, the below response (in red) adequately addresses what was summarized for the DOGAMI consultation. From this perspective, I think it's fine for the Applicant to advance to the next stage (but that's your decision).

However, as discussed, the Applicant's attached document on design requirements is missing seismic standards that should definitely be included. I don't know all the codes and standards that are missing—and it's up to the Applicant to conduct address this gap (research missing codes and standards, add it to their design requirements list, as well as conduct the appropriate actions through the entire project, such as design).

As an important specific example, IEEE 693 is the industry standard for transformers and other substation equipment and components. This standard is missing from their list of design requirements. I mentioned this standard during the DOGAMI Consultation. It's quite possible that other seismic standards may also be missing from their list and their practice. The onus is on the Applicant to do due diligence on knowing the relevant industry codes and standards as well as integrating them into their proposed project.

A draft 2018 version of IEEE 693 is available, which would be the preferred standard for use (as opposed to 2005 IEEE 693). Here's a brief description:

**IEEE 693 RECOMMENDED PRACTICE.** A common standard within the Seismic Certification realm is IEEE 693: IEEE Recommended Practice for Seismic Design of Substations. IEEE 693 covers seismic qualification of battery racks, transformers, switchgear and other products and equipment for substations.

Happy holidays!

Yumei

Yumei Wang, P.E. | Resilience Engineer  
Oregon Department of Geology and Mineral Industries (DOGAMI)  
800 NE Oregon Street, Suite 965, Portland, Oregon 97232  
Office: (971) 673-1551 | Mobile: (503) 913-5749  
[yumei.wang@oregon.gov](mailto:yumei.wang@oregon.gov) | [www.oregongeology.org](http://www.oregongeology.org)

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**From:** MAY Luke \* ODOE  
**Sent:** Friday, December 21, 2018 11:02 AM

**To:** WANG Yumei \* DGMI <Yumei.WANG@oregon.gov>  
**Subject:** FW: Summit Ridge Wind DOGAMI consultation notes

Hi Yumei,

I wanted to forward these responses to you - the certificate holder responded to our requests in the email in red font below. Will you be taking vacation during the holidays? If not, would you have an opportunity for a phone call at your earliest convenience? We would like to determine whether these responses, in DOGAMI's opinion, are sufficient as soon as possible. Thanks again for your help on this project!

-Luke

Luke May  
Siting Analyst  
Oregon Department of Energy  
550 Capitol St NE, 1<sup>st</sup> Floor  
Salem, OR 97301  
P:(503) 373-7115

[Oregon.gov/energy](http://Oregon.gov/energy)



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**From:** Fossum, Linnea [<mailto:Linnea.Fossum@tetrattech.com>]  
**Sent:** Thursday, December 20, 2018 3:17 PM  
**To:** MAY Luke \* ODOE <[Luke.May@oregon.gov](mailto:Luke.May@oregon.gov)>; Cavanagh, Suzy <[Suzy.Cavanagh@tetrattech.com](mailto:Suzy.Cavanagh@tetrattech.com)>  
**Cc:** Derek Price <[Derek.Price@patternenergy.com](mailto:Derek.Price@patternenergy.com)>; CLIFFORD Katie \* ODOE <[Katie.Clifford@oregon.gov](mailto:Katie.Clifford@oregon.gov)>; WANG Yumei \* DGMI <[Yumei.WANG@oregon.gov](mailto:Yumei.WANG@oregon.gov)>; Adam Cernea Clark <[Adam.CerneaClark@patternenergy.com](mailto:Adam.CerneaClark@patternenergy.com)>; Kevin Wetzel <[Kevin.Wetzel@patternenergy.com](mailto:Kevin.Wetzel@patternenergy.com)>  
**Subject:** RE: Summit Ridge Wind DOGAMI consultation notes

Luke, please see responses from Pattern below and attached, and let me know if you have further questions.

**Linnea Fossum, PE** | Senior Project Manager  
Direct +1 (425) 482-7823 | Main +1 (425) 482-7600 | Mobile +1 (425) 765-3043 | [linnea.fossum@tetrattech.com](mailto:linnea.fossum@tetrattech.com)

**Tetra Tech** | Complex World, Clear Solutions™ | Environmental Services Divisions  
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**From:** MAY Luke \* ODOE <[Luke.May@oregon.gov](mailto:Luke.May@oregon.gov)>

**Sent:** Friday, November 30, 2018 8:21 AM

**To:** Cavanagh, Suzy <[Suzy.Cavanagh@tetrattech.com](mailto:Suzy.Cavanagh@tetrattech.com)>

**Cc:** Fossum, Linnea <[Linnea.Fossum@tetrattech.com](mailto:Linnea.Fossum@tetrattech.com)>; Derek Price <[Derek.Price@patternenergy.com](mailto:Derek.Price@patternenergy.com)>; CLIFFORD Katie \* ODOE <[Katie.Clifford@oregon.gov](mailto:Katie.Clifford@oregon.gov)>; WANG Yumei \* DGMI <[Yumei.WANG@oregon.gov](mailto:Yumei.WANG@oregon.gov)>

**Subject:** RE: Summit Ridge Wind DOGAMI consultation notes

Hello Suzy,

Thank you very much for the notes that memorialize the DOGAMI consultation from November 14. We have reviewed the notes with DOGAMI, and require the following information to be incorporated within the revised RFA:

- Delineate specific standards that will be used for design of the facility (e.g., National Electric Safety Code for transmission lines) as well as for all facility components;  
**Response: Please see attached design requirements applied to EPC contracts issued by Pattern for design and construction of wind facilities in the U.S.**
- Discuss long-period ground motion hazards, and how you plan to design, engineer, and construct the facility to avoid dangers to human safety and the environment presented by those hazards;  
**Response: Based on the results of the final site specific geotechnical investigation, a mitigation plan to address any concerns with long-period ground motion would be developed to avoid dangers to human safety and the environment. The mitigation plan would take into account the probability of ground motions occurring during the expected design life of the facility.**
- Provide more discussion of disaster resilience design and designs for future climate conditions (as discussed during the consultation) to address Division 21 requirements and;  
**Response: To provide some additional clarity around disaster resiliency, typical ASCE7 Conditions assume a maximum wind gust of 90 mph as the worst case loading conditions on a transmission line, Pattern Development specifies 100mph maximum gust of wind. Pattern Development also takes into account other environmental factors such as fire risk and ensuring transmission structures are either steel or have a fire retardant coating on the wooden poles on the lower portion of the structures to fend off small brush fires if they were to occur. While it's hard to predict all future climatic conditions, our current codes and design specifications are continuously evolving and go through annual technical reviews to ensure they are current to the latest technology and means and methods for renewable energy facilities.**
- Provide a description and schedule of site-specific geotechnical work that will be performed prior to construction for inclusion in the site certificate as conditions.  
**Response: Site specific geotechnical investigative work with include borings at all wind turbine locations; transmission line dead-ends, turning structures, and one (1) bore every mile on tangent structure locations; substation(s), and the Operations and Maintenance Facility. Typical bores for wind turbine foundations reach a depth of 50 feet, all other infrastructure is bored to a depth of approximately 35 feet. In addition to the physical site-specific geotechnical work, extensive desktop studies will be performed to evaluate the geology, soil-related hazards, and seismic hazards that addresses all potential issues identified by the Oregon Department of Geology and Mineral Industries. It is expected the site-specific geotechnical work would commence approximately six (6) months to one (1) year prior to commencement of construction**

Please let me know if you have any questions,

Thank you,

-Luke

Luke May

Siting Analyst  
Oregon Department of Energy  
550 Capitol St NE, 1<sup>st</sup> Floor  
Salem, OR 97301  
P:(503) 373-7115

Oregon.gov/energy



---

**From:** Cavanagh, Suzy [<mailto:Suzy.Cavanagh@tetrattech.com>]  
**Sent:** Wednesday, November 28, 2018 1:03 PM  
**To:** WANG Yumei \* DGMI <[Yumei.WANG@oregon.gov](mailto:Yumei.WANG@oregon.gov)>  
**Cc:** MAY Luke \* ODOE <[Luke.May@oregon.gov](mailto:Luke.May@oregon.gov)>; Fossum, Linnea <[Linnea.Fossum@tetrattech.com](mailto:Linnea.Fossum@tetrattech.com)>; Derek Price <[Derek.Price@patternenergy.com](mailto:Derek.Price@patternenergy.com)>  
**Subject:** Summit Ridge Wind DOGAMI consultation notes

Hi Yumei,  
Please find attached the draft notes summarizing DOGAMI consultation on November 14, 2018 for the Summit Ridge Wind Project for your review and approval.

Please let me know if you have any questions.

Thank you,  
Suzy

**Suzy Cavanagh, P.G.** | Project Manager  
Direct: 208.489.2868 | Cell: 208.871.0720  
[suzy.cavanagh@tetrattech.com](mailto:suzy.cavanagh@tetrattech.com)

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## MAY Luke \* ODOE

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**From:** WANG Yumei \* DGMI  
**Sent:** Wednesday, December 26, 2018 4:50 PM  
**To:** CLIFFORD Katie \* ODOE; MAY Luke \* ODOE  
**Cc:** WANG Yumei \* DGMI  
**Subject:** FW: Leon, missing any references (EFSC)?

Hi Katie and Luke,

Nice talking to you about “the middle ground” approach.

I’m getting some feedback on missing references and digesting it. But, you can see below that it can get complicated.

As the wind industry matures, they will likely be improving their designs for seismic conditions. In the meantime, we should make sure that they are using the below references when appropriate,

---

**From:** Kempner, Leon Jr (BPA) - TEL-TPP-3 <lkempnerjr@bpa.gov>  
**Sent:** Wednesday, December 26, 2018 4:21 PM  
**To:** WANG Yumei \* DGMI <Yumei.WANG@oregon.gov>  
**Subject:** RE: Leon, missing any references (EFSC)?

Quick look

There are a few standards that could be used and are not included in the file that was attached. Some of the following standards would only be applicable if the transmission structure type was being considered. When it come to the IEC and ANSI standards there are so many and would only be applicable if the type of equipment was being considered for the project.

### TIA EIA 222

Seismic:

IEEE 693, Recommended Practice for Seismic Design of Substations

IEEE 1527, Recommended Practice for Design of Buswork Located in Seismically Active Areas

ASCE 113, Guide for Design of Substation Structures (Addresses the seismic design of non-equipment supports)

Lattice Transmission Line Towers

ASCE 10, Design of Latticed Steel Transmission Structures

Substation Structures

ASCE 113, Guide for Design of Substation Structures

Transmission Line Towers

IEEE 1307, Standard for Fall Protection for Utility Work

IEEE 751, Trial-Use Design Guide for Wood Transmission Structures

IEEE 977, Guide for Installation of Foundations for Transmission Line Structures

USDA/RUS Standards (<https://www.rd.usda.gov/publications/regulations-guidelines/bulletins/electric>) Such as:

1724E-200 Design Manual for High Voltage Transmission Lines (12/2/15)

1724E-204 Guide Specifications for Steel Single Pole and H-Frame Structures (11/17/16)

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**From:** WANG Yumei \* DGMI [<mailto:Yumei.WANG@oregon.gov>]  
**Sent:** Wednesday, December 26, 2018 11:31 AM  
**To:** Kempner, Leon Jr (BPA) - TEL-TPP-3  
**Cc:** WANG Yumei \* DGMI  
**Subject:** [EXTERNAL] Leon, missing any references (EFSC)?

Hi Leon,

Happy Boxing Day!

As you may know, I conduct geologic hazard related consultations and reviews for (most all) new proposed energy facilities via a state agency-to-agency contract with the Oregon Dept of Energy.

I request that Applicants (that propose energy projects) to specify the codes, standards and guidelines that they plan to use. They must also consider disaster resilience and climate change in their proposed design.

Attached is one Applicant's document on design requirements. It is missing seismic standards that should definitely be included for projects in the State of Oregon (including eastern Oregon). As an important specific example, IEEE 693 is missing. I have advised that they use the draft 2018 version of IEEE 693 (as opposed to 2005 IEEE 693), and that it is the industry standard for transformers and other substation equipment and components.

It's quite possible that other seismic and non-seismic-related standards may also be missing from this list and as well as their practice. And although the onus is on Applicants to do due diligence on knowing the relevant industry codes and standards as well as integrating them into their proposed project, I wanted to be sure that I am generally aware of the more important references. So, I'm asking for your help on this matter...

My question for you:

Are any important design codes and standards missing from the attached list that is important for design for new projects involving electrical generation and getting the electricity to the grid?

For example, how important is TIA/EIA-222-G, the structure standard for antenna supporting structures and antennas? Is all of the design info already in ASCE 7-16?

Also, are there any important best practices on O&M that I could be referring to?

Thanks very much for your help.

Yumei

Yumei Wang, P.E. | Resilience Engineer  
Oregon Department of Geology and Mineral Industries (DOGAMI)  
800 NE Oregon Street, Suite 965, Portland, Oregon 97232  
Office: (971) 673-1551 | Mobile: (503) 913-5749  
[yumei.wang@oregon.gov](mailto:yumei.wang@oregon.gov) | [www.oregongeology.org](http://www.oregongeology.org)

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*Unless otherwise indicated, all information in this correspondence is classified as Level 1, "Published" according to State of Oregon statute and administrative policy.*

## MAY Luke \* ODOE

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**From:** Christian Nauer <christian.nauer@ctwsbnr.org>  
**Sent:** Monday, November 19, 2018 12:00 PM  
**To:** MAY Luke \* ODOE  
**Cc:** Robert Brunoe  
**Subject:** Re: ODOE requested comment on the Summit Ridge Wind Facility  
**Attachments:** PastedGraphic-1.pdf

Dear Luke,

Thank you for the opportunity to comment on the Summit Ridge Wind Facility.

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 territories and areas of concern for the CTWSRO.

Project-specific Comment(s):

This office considers the archaeological survey report (Rooke 2010) to be a good faith effort to identify historic properties within the APE. Exhibit S of the Preliminary Application indicates that the design for the facility has been modified to avoid potentially eligible sites during Project implementation, and that all sites are to be identified as "no-work zones". In addition, archaeological monitoring has been recommended for areas near archaeological sites and within areas that have a high probability of containing previously undiscovered cultural resources (ridge tops with deep sediments).

If the following conditions are met, this office concurs that a reasonable and good faith effort has been made to identify, evaluate, and protect historic properties and cultural resources within the Project APE:

- The project design avoids previously recorded sites (as described in Exhibit S);
- An archaeological or Tribal monitor will be present for all ground-disturbing activities near known sites and in areas with a high probability for undiscovered cultural resources (as described in Exhibit S);
- An Inadvertent Discovery Plan (IDP) for human remains, items of cultural patrimony, and intact archaeological deposits (and consistent with Oregon SHPO guidelines) will be in place prior to construction;
- Constructions crews will be trained/briefed on the contents and importance of the IDP.

Please share with this office any forthcoming monitoring report, or any other information relevant to cultural resource work associated with this Project.

Thanks again for your consideration, please contact me if you have any questions,

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 541.460.8448

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 Nov 19, 2018, at 11:09 AM, MAY Luke \* ODOE <[Luke.May@oregon.gov](mailto:Luke.May@oregon.gov)> wrote:

Hi Christian,

Thanks again for speaking with us a couple weeks ago. We would like to publish our Draft Proposed Order soon on this project; would you be able to draft a comment letter relating to the Summit Ridge Wind Farm that summarizes our previous conversation that you did not have a concern with the project? Thanks again – I hope to interact with you on more projects in the future.

-Luke

Luke May  
Siting Analyst  
Oregon Department of Energy  
550 Capitol St NE, 1<sup>st</sup> Floor  
Salem, OR 97301  
P:(503) 373-7115

[Oregon.gov/energy](http://Oregon.gov/energy)  
<image001.jpg>

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**From:** Christian Nauer [<mailto:christian.nauer@ctwsbnr.org>]  
**Sent:** Monday, November 05, 2018 8:23 AM  
**To:** MAY Luke \* ODOE <[Luke.May@oregon.gov](mailto:Luke.May@oregon.gov)>  
**Subject:** Re: ODOE requested comment on the Summit Ridge Wind Facility

Hi Luke,

Sure, I will be in Monday until about 4pm. Please drop a line.

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 541.460.8448

On Nov 2, 2018, at 2:30 PM, MAY Luke \* ODOE <[Luke.May@oregon.gov](mailto:Luke.May@oregon.gov)> wrote:

Hi Christian,

I see you're out today. My colleague, Sarah Esterson, and I are available from 11:00 - 1:00 and from 2:00 - 3:00. We'll try calling your office at 541-553-2026 - would 11:30 am Monday work for you? Thanks again,

-Luke

Luke May  
Siting Analyst  
Oregon Department of Energy  
550 Capitol St NE, 1<sup>st</sup> Floor  
Salem, OR 97301  
P:(503) 373-7115

[Oregon.gov/energy](http://Oregon.gov/energy)

<image001.jpg>

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**From:** Christian Nauer [<mailto:christian.nauer@ctwsbnr.org>]

**Sent:** Wednesday, October 31, 2018 4:48 PM

**To:** MAY Luke \* ODOE <[Luke.May@oregon.gov](mailto:Luke.May@oregon.gov)>

**Subject:** Re: ODOE requested comment on the Summit Ridge Wind Facility

Hi Luke,

Sure, I'd be happy to talk with you on the phone. I'm in the office a majority of the time. I'm out of the office this Friday (Nov. 2) but tomorrow or next week would be fine.

Please drop a line when you have a minute,

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 541.460.8448

On Oct 29, 2018, at 12:00 PM, MAY Luke \* ODOE  
<[Luke.May@oregon.gov](mailto:Luke.May@oregon.gov)> wrote:

Hello Christian Nauer,

I sent this e-mail (below) to Robert Brunoe, Roberta Kirk, and Kathleen Sloan last week. I apologize that I didn't include you – I was recently alerted to the fact that you should have been notified and I have since updated our contact list database to include you.

The project described below is the 4<sup>th</sup> amendment to a previously approved wind energy facility. Would you have availability to set up time for a phone call? I would like to answer any questions you may have relating to project design or relating to the Energy Facility Siting Council review process. Thank you for your time.

Sincerely,

-Luke

Luke May  
Siting Analyst  
Oregon Department of Energy  
550 Capitol St NE, 1<sup>st</sup> Floor  
Salem, OR 97301  
P:(503) 373-7115

[Oregon.gov/energy](http://Oregon.gov/energy)

<image001.jpg>

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**From:** MAY Luke \* ODOE

**Sent:** Monday, October 22, 2018 9:47 AM

**To:** '[robert.brunoe@ctwsbnr.org](mailto:robert.brunoe@ctwsbnr.org)' <[robert.brunoe@ctwsbnr.org](mailto:robert.brunoe@ctwsbnr.org)>;

'[roberta.kirk@ctwsbnr.org](mailto:roberta.kirk@ctwsbnr.org)' <[roberta.kirk@ctwsbnr.org](mailto:roberta.kirk@ctwsbnr.org)>;

'[kathleen.sloan@ctwsbnr.org](mailto:kathleen.sloan@ctwsbnr.org)' <[kathleen.sloan@ctwsbnr.org](mailto:kathleen.sloan@ctwsbnr.org)>

**Subject:** ODOE requested comment on the Summit Ridge Wind Facility

Hello Robert Brunoe, Roberta Kirk, and Kathleen Sloan,

ODOE received a preliminary Request for Amendment (pRFA) 4 to the Summit Ridge Wind Farm site certificate on August 16, 2018. The Summit Ridge Wind Farm is an approved, but not yet constructed, wind facility consisting of up to 72 wind turbines with a peak generating capacity of 194.4 megawatts. In accordance with the existing site certificate, construction must begin by August 19, 2018 and be completed by August 19, 2021. The pRFA requests to extend each of these construction deadlines by 2 years.

The pRFA is available on our website at the following link: <https://www.oregon.gov/energy/facilities-safety/facilities/Pages/SRW.aspx>

Link to PDF map (poor resolution)  
<https://www.oregon.gov/energy/facilities-safety/facilities/Facilities%20library/Summit-Ridge-Map.pdf>

Link to GIS interactive map  
<https://geo.maps.arcgis.com/home/webmap/viewer.html?webmap=5f58fa2370004bf6b42cafe8187badae&find=Summit%20Ridge%20Wind%20Farm&mapOnly=true>

I have attached to this e-mail, the original exhibit pertaining to cultural, historic, and archaeological resources. The Department would like to know whether the Warm Spring Tribe has identified an historic, cultural, and archaeological resources located within the wind farm project site boundary. I have also attached the relevant conditions in the current Site Certificate. Included within these conditions is that the developer must maintain a 200 foot buffer around all rock alignments and cairn sites, and must implement a 100 foot buffer around all other archaeological site. If you would like to review the confidential exhibit relating to this project, I will reach out to the developer and they can send you those documents.

I am also available to discuss this project by phone, at 503-373-7115 if you have any questions. Thanks,

Luke May  
Siting Analyst  
Oregon Department of Energy  
550 Capitol St NE, 1<sup>st</sup> Floor  
Salem, OR 97301  
P:(503) 373-7115

[Oregon.gov/energy](https://www.oregon.gov/energy)  
<image001.jpg>

<Summit Ridge Wind Historic, Cultural, and Archaeological resource coundi....pdf><ASC Exhibit S.pdf>

## **Attachment C: Commenter Index**

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<b>Date Received</b>	<b>Name</b>
1/22/2019	Monica Delzeit
1/29/2019	Larry Martin
1/30/2019	Ben Asher
1/30/2019	April Atwood
1/30/2019	Suzanne Bader
1/30/2019	Dee Jay Barbee
1/30/2019	Robert Bernstein
1/30/2019	Sharlane Blaise
1/30/2019	Ron Bloodworth
1/30/2019	Tika Bordelon
1/30/2019	Barbara Branham
1/30/2019	Richard Brems
1/30/2019	Roger Brewer
1/30/2019	melinda bronsdon
1/30/2019	Elizabeth Brooke-Willbanks
1/30/2019	Caryl Brown
1/30/2019	Kristian Burch
1/30/2019	Jean Butcher
1/30/2019	Bruce Cantwell
1/30/2019	Pat Case
1/30/2019	MS. Helen Caswell
1/30/2019	Anne Clark
1/30/2019	Connie Coleman
1/30/2019	Brian Skeahan
1/30/2019	Mark Darienzo
1/30/2019	Chris DeBruler
1/30/2019	Ellen Donoghue
1/30/2019	Susan Dornfeld
1/30/2019	Sejal D'Souza
1/30/2019	Joell Ellis
1/30/2019	Stephanie Feldstein
1/30/2019	M Field544
1/30/2019	David and Beth Finn
1/30/2019	Laurie Fisher
1/30/2019	Sheila Ford Richmond
1/30/2019	Andrew Frishman
1/30/2019	John Goeckermann
1/30/2019	Marshall Goldberg
1/30/2019	Mike Goyette
1/30/2019	Joe Grand

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<b>Date Received</b>	<b>Name</b>
1/30/2019	a g
1/30/2019	Fred Greef
1/30/2019	Paul Grim
1/30/2019	Mary Grout
1/30/2019	Sarah B Grummert
1/30/2019	Sarah Hafer
1/30/2019	Kyle Haines
1/30/2019	Maria Hall
1/30/2019	Mary Hayden
1/30/2019	Susan Haywood
1/30/2019	Stephanie Heisler
1/30/2019	Carol Hopkins
1/30/2019	Celeste Howard
1/30/2019	Leslie Hunter
1/30/2019	Marlene Huntsinger
1/30/2019	Ben Ignatowski
1/30/2019	Don Jacobson
1/30/2019	Sandra Joos
1/30/2019	Joel Kay
1/30/2019	George Keefe
1/30/2019	John Koenig
1/30/2019	Paul Landau
1/30/2019	Lindy Le Coq
1/30/2019	Francis Lenski
1/30/2019	Judith Lienhard
1/30/2019	Robert Lindberg
1/30/2019	James Loacker
1/30/2019	Craig Loftin
1/30/2019	Sammy Low
1/30/2019	Carol Macbeth
1/30/2019	Barbara Manildi
1/30/2019	Erica Maranowski
1/30/2019	Arnold Martin
1/30/2019	Libby Martin
1/30/2019	Tamara Mathews
1/30/2019	Rebecca Maxey
1/30/2019	Kyle McCleery
1/30/2019	Gary McCuen
1/30/2019	Daniel McGuire
1/30/2019	Susan McLaughlin

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<b>Date Received</b>	<b>Name</b>
1/30/2019	Mona McNeil
1/30/2019	Lucy Mead
1/30/2019	Sherry Meier
1/30/2019	Sherry Meier
1/30/2019	Jacob Meyer
1/30/2019	Luanne Mierow
1/30/2019	Jim Minick
1/30/2019	Gregory Misarti
1/30/2019	Laura Morello
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1/30/2019	Hilary Nally
1/30/2019	John Nettleton
1/30/2019	Katrina O'Connor
1/30/2019	Andrew Oldham
1/30/2019	Lynne Oulman
1/30/2019	Rachael Pappano
1/30/2019	Andrea Partenheimer
1/30/2019	Luan Pinson
1/30/2019	Jan Polychronis
1/30/2019	Delores Porch
1/30/2019	Carol Randell
1/30/2019	Lin Reedijk
1/30/2019	Donna Richards
1/30/2019	Ryan Rittenhouse
1/30/2019	John Rogers
1/30/2019	Scott Rokus
1/30/2019	Sally Russell
1/30/2019	Gloria Sanders
1/30/2019	Stephanie Sandmeyer
1/30/2019	Susan Saul
1/30/2019	Del Scharffenberg
1/30/2019	Diane Schauer
1/30/2019	SUSANA SERNA
1/30/2019	Timothy Sherburne
1/30/2019	Anne Simmons
1/30/2019	Laura Smith
1/30/2019	Chris Sokol
1/30/2019	Lynn Shauinger
1/30/2019	Janice Banks
1/30/2019	Kay Hagen

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<b>Date Received</b>	<b>Name</b>
1/30/2019	Richard Spratley
1/30/2019	Dorothy Foley
1/30/2019	Kristin Ebbe
1/30/2019	Erica Risberg
1/30/2019	Carolyn Latierra
1/30/2019	Shawn Sargent
1/30/2019	Ellen O'Connor
1/30/2019	Bronwen Evans
1/30/2019	Steven Woolpert
1/30/2019	Michael Wolf
1/30/2019	Carolyn Williams
1/30/2019	D.A Wiley
1/30/2019	Jeffrey White
1/30/2019	Michelle West
1/30/2019	Bob Warren
1/30/2019	Benjamin Ward
1/30/2019	Jen Velinty
1/30/2019	Martin Velez
1/30/2019	Marie Uhlir
1/30/2019	Betsy Toll
1/30/2019	Mara Sunshine
1/30/2019	Judy Steinberger
1/30/2019	Heather Stanhope
1/30/2019	Lisa Howell
1/30/2019	Joy Brandt
1/30/2019	James Holt
1/30/2019	Lorraine Foster
1/30/2019	Chris Riesch
1/30/2019	Barbara Bernstein
1/30/2019	Zsanine Alexander
1/31/2019	Matthew Barmann
1/31/2019	Kristine Beam
1/31/2019	Steven Beiswenger
1/31/2019	Susan Brothers
1/31/2019	Gary Brown
1/31/2019	Abigail Corbet
1/31/2019	LYNDA CUNNINGHAM
1/31/2019	Laura Farah
1/31/2019	Shira Fogel
1/31/2019	Frank Fromherz



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<b>Date Received</b>	<b>Name</b>
1/31/2019	Marceline Gearry
1/31/2019	Sharon Goldsworthy
1/31/2019	Laura Hanks
1/31/2019	Judy Henderson
1/31/2019	Ted Hoff
1/31/2019	Kathy Hur
1/31/2019	Jenny Jenkins
1/31/2019	Jeremiah Jenkins
1/31/2019	Kim Kahl
1/31/2019	John Kirkland
1/31/2019	Mauria McClay
1/31/2019	Lesley Moore
1/31/2019	Catherine Myers
1/31/2019	Jan Rising
1/31/2019	Ms. Beth Marshall
1/31/2019	John Colman-Pinning
1/31/2019	Patricia Forrest
1/31/2019	Lloyd Vivola
1/31/2019	Chris Sokol
1/31/2019	Kevin Silvey
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2/1/2019	Joseph Gush
2/1/2019	Susan Hartford
2/1/2019	Michael Hendricks
2/1/2019	Camilla Paynter
2/1/2019	Rebecca Pelton
2/1/2019	Karen Pickering
2/1/2019	Nora Polk
2/1/2019	Nora POLK
2/1/2019	Debra Rehn
2/1/2019	Howard Shapiro
2/1/2019	Art Shapiro
2/1/2019	Danielle Stutheit
2/1/2019	Martin J. Velez
2/1/2019	Laurie Turner
2/1/2019	Timothy Speirs
2/2/2019	Mr. John Colman-Pinning
2/2/2019	Gina Cox
2/2/2019	Grant Fujii
2/2/2019	David Grant

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<b>Date Received</b>	<b>Name</b>
2/2/2019	Don Manghelli
2/2/2019	Carolyn Stewart
2/3/2019	Gary Economus
2/3/2019	Patricia Freiberg
2/3/2019	Diane Kondrat
2/3/2019	Joyce Leggatt
2/3/2019	Jeremiah Leipold
2/3/2019	Richard Osmun
2/3/2019	Judy Bensinger
2/3/2019	Judy Childers
2/4/2019	carole beauclerk
2/4/2019	Richard Johnson
2/4/2019	Patricia Mizutani
2/4/2019	Alex Prentiss
2/4/2019	Judy Todd
2/5/2019	Lee Bhattacharji
2/5/2019	Carol Edwards
2/5/2019	Karen Pecsok
2/5/2019	Lynn Herring
2/8/2019	David Shaw
2/11/2019	John Nelson
2/11/2019	Dena Turner
2/15/2019	Wendy Bartlett
2/15/2019	Marisa Bedford
2/15/2019	Marianne Brevard
2/15/2019	Keith Brown
2/15/2019	Teresa Robbins
2/15/2019	Cory Buckley
2/15/2019	Gary Bushman
2/15/2019	Jane Camero
2/15/2019	robert connor
2/15/2019	George Cummings
2/15/2019	Scott Dady
2/15/2019	Ruth Darden
2/15/2019	Sheila Dooley
2/15/2019	Alexandra Faizulaeva-Smith
2/15/2019	Jeff Forbes
2/15/2019	Daisy Franzini
2/15/2019	Derek Gendvil
2/15/2019	Lawrence Gordin

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<b>Date Received</b>	<b>Name</b>
2/15/2019	David Griffith
2/15/2019	John Hall
2/15/2019	Jane Heisler
2/15/2019	Marna Herrington
2/15/2019	Benjamin Hoey
2/15/2019	Carol Hopkins
2/15/2019	Tess Husbands
2/15/2019	Karen Ireland
2/15/2019	Carol Jagiello
2/15/2019	Harry Knapp
2/15/2019	Roger Mangrum
2/15/2019	Avin Marr
2/15/2019	Michelle Mayfield
2/15/2019	John Meiser
2/15/2019	David Michalek
2/15/2019	David Michalek
2/15/2019	Sharon Miller
2/15/2019	Gregory Monahan
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2/15/2019	Carrie Nobles
2/15/2019	CA O'Donnell
2/15/2019	Liane Owen
2/15/2019	Adina Parsley
2/15/2019	Sue Mandeville
2/15/2019	Phil Pizanelli
2/15/2019	Rick Ray
2/15/2019	Norma Reich
2/15/2019	Kalama Reuter
2/15/2019	Tyler Rise
2/15/2019	Margaret Sakoff
2/15/2019	Claudia Sanzone
2/15/2019	Martin Schwartz
2/15/2019	Dawn Smallman
2/15/2019	Heide Smith
2/15/2019	Linda Whealin
2/15/2019	Richard Weigel
2/15/2019	Leslee Viehoff
2/15/2019	Nancy M. Vanderpool
2/15/2019	Marcia Tate

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<b>Date Received</b>	<b>Name</b>
2/15/2019	Sally Stevens
2/15/2019	Ian Shelley
2/15/2019	Crystal Elston
2/15/2019	Daniel Price
2/15/2019	Dave Willis
2/16/2019	Roland Begin
2/16/2019	Chris Smith
2/16/2019	Carolyn Eckel
2/16/2019	David Michalek
2/16/2019	Pablo Bobe
2/16/2019	Dawn Mason
2/16/2019	Colleen McCaffrey
2/16/2019	Sara Todd
2/16/2019	dr E W
2/16/2019	Lissa Michaeli
2/17/2019	Raleigh koritz
2/17/2019	Jean Naples
2/17/2019	Chris Hastings
2/17/2019	Peggy Chambers
2/17/2019	Jerily Rushworth
2/17/2019	Sija Sur
2/17/2019	Barry Frederick Baudains
2/17/2019	Petra Stadtmueller
2/17/2019	Janet Robinson
2/17/2019	Gregory Esteve
2/17/2019	Kat Howren
2/18/2019	Arjen Hoekstra
2/18/2019	Tamara Miller
2/19/2019	Rebecca Clark
2/19/2019	Sarah Cook
2/19/2019	Sarah Duvall
2/19/2019	Ruth Flemming
2/19/2019	Dana Greenbaum
2/19/2019	David Hooper
2/19/2019	Jan Hurst
2/19/2019	Jonathan and Deanne Ater
2/19/2019	Betty/Charles Lavis/Brasher
2/19/2019	Susan Lenski
2/19/2019	Jean Naples
2/19/2019	Molly Porterfield

**Attachment C: Draft Proposed Order Comment Index**

<b>Date Received</b>	<b>Name</b>
2/19/2019	Shireen Press
2/19/2019	Dianne Ensign
2/19/2019	Anna Brewer
2/19/2019	Thomas Keys
2/19/2019	James Baker
2/19/2019	Amy Titus
2/19/2019	Monica Riedler
2/19/2019	Jerri Berg
2/19/2019	Eileen Stark
2/19/2019	Robin Kaai
2/19/2019	Elisabeth Ritter
2/19/2019	Timea Vida
2/19/2019	David Douglas
2/19/2019	Holly Evans
2/19/2019	Benton Elliott
2/19/2019	Nicolas Duon
2/19/2019	Ciry Null
2/19/2019	Mary Able
2/19/2019	Dana Weintraub
2/19/2019	Kyle Haines
2/19/2019	Helen Hayes
2/19/2019	Debbi Paden
2/19/2019	Melissa Smith
2/19/2019	Morgan Corviday
2/19/2019	Claire Cohen
2/19/2019	Glenn Dorband
2/19/2019	Lee Rengert
2/19/2019	Kimberly Beeler
2/19/2019	Darlene Ashley
2/19/2019	JL Angell
2/19/2019	Jan Golick
2/19/2019	Diane Blazer
2/19/2019	Dori Cole
2/19/2019	Christina Pasillas
2/19/2019	Nathan Wetzel
2/19/2019	Nancy Gregory
2/19/2019	Christine Bourdette
2/19/2019	Tonia Twigger
2/19/2019	Calli Madrone
2/19/2019	Chris Drumright

**Attachment C: Draft Proposed Order Comment Index**

<b>Date Received</b>	<b>Name</b>
2/19/2019	Ute Baker
2/19/2019	Hartson Doak
2/19/2019	Liv Bly
2/19/2019	Ernst Mecke
2/19/2019	Deborah Rossum
2/19/2019	Susan Wilson
2/19/2019	cave man
2/19/2019	Carlton Ward
2/19/2019	Steve Sheehy
2/19/2019	Michael Van Kleeck
2/19/2019	Harry Freiberg
2/19/2019	Robert Husbands
2/19/2019	Brad Bush
2/19/2019	Jean Cheesman
2/19/2019	Jessica Mitchell
2/19/2019	Lasha Wells
2/19/2019	Shawna Blaker
2/19/2019	Sabrina Thompson
2/19/2019	Susan Heath
2/19/2019	Caryn Ackerman
2/19/2019	Michele Walters
2/19/2019	Frances Hast
2/19/2019	Margaret 'Meg' Ruby
2/19/2019	Jennifer Nitz
2/19/2019	Amber Armstrong
2/19/2019	Judith Arcana
2/19/2019	JL Angell
2/19/2019	Paul Anderson
2/19/2019	Patricia Always
2/19/2019	Cindy Allen
2/19/2019	Teresa Allen
2/19/2019	Blaine Ackley
2/19/2019	Mary Able
2/19/2019	Christian Nauer, MS
2/19/2019	Linnea Fossum, PE
2/19/2019	Peter Zurcher
2/19/2019	Lee Zucker
2/19/2019	Mike Zotter
2/19/2019	Irene Zimmerman
2/19/2019	Jean Wyman

**Attachment C: Draft Proposed Order Comment Index**

<b>Date Received</b>	<b>Name</b>
2/19/2019	Michelle Wright
2/19/2019	Colleen Wright
2/19/2019	Donna Wehrley
2/19/2019	Jason Weeks
2/19/2019	Sandy Wallsmith
2/19/2019	Jennifer Szolnoki
2/19/2019	Don Stephens
2/19/2019	Ann Cobban
2/19/2019	Judith Maron-Friend
2/19/2019	Kristen Swanson
2/19/2019	Jo Ellen Woodrow
2/19/2019	Leslie Burpo
2/19/2019	Diana Winer
2/19/2019	Erin Quinn
2/19/2019	Eugene Kiver
2/19/2019	Pamela Bilderbeck
2/19/2019	David Heckman
2/19/2019	Lucy Mead
2/19/2019	Matthew Schaut
2/19/2019	Brock Roberts
2/19/2019	Michael Field
2/19/2019	Candice Copeland
2/19/2019	Karen Elkins
2/19/2019	Terry Dalsemer
2/19/2019	Paul Borcharding
2/19/2019	Kristel Buechner
2/19/2019	David Lunde
2/19/2019	Laura Thomae
2/19/2019	Carla Williams
2/19/2019	Patricia Armstrong
2/19/2019	Olivier Desport
2/19/2019	Rob Rondanini
2/19/2019	Caroline Sevilla
2/19/2019	Johann Hauer
2/19/2019	Jan Modjeski
2/19/2019	Elisabeth Bechmann
2/19/2019	Paul Daly
2/19/2019	Brian Altman
2/19/2019	Beth Workman
2/19/2019	Fay Forman

**Attachment C: Draft Proposed Order Comment Index**

<b>Date Received</b>	<b>Name</b>
2/19/2019	Tom Kozel
2/19/2019	Britt Floyd
2/19/2019	France Davis
2/19/2019	Susan Haywood
2/19/2019	Nancy Howard
2/19/2019	Debbie Schlenoff
2/19/2019	Anita Gwinn
2/19/2019	Amy Elephano
2/19/2019	Jim and Sophie Swirczynski
2/19/2019	Grace Myer
2/19/2019	Jennifer Valentine
2/19/2019	Rosalie Sable
2/19/2019	Marc Daniel
2/19/2019	Michael Price
2/19/2019	Cyndi Clough
2/19/2019	Adelina Jaudal Jaudal
2/19/2019	Gloria Pichetti
2/19/2019	Wally Sykes
2/19/2019	Wendy Holzman
2/19/2019	Kelly Dunn
2/19/2019	John Andersen
2/19/2019	Dianne Douglas
2/19/2019	Cindy Cannon
2/19/2019	Michelle West
2/19/2019	A. Todd
2/19/2019	Deborah Lipman
2/19/2019	Mark Betti
2/19/2019	Bonnie Kuppler
2/19/2019	Rodger Hoyt
2/19/2019	George Kuppler
2/19/2019	Hillary Tiefer
2/19/2019	Mark Crane
2/19/2019	Valerie Thomert
2/19/2019	Pamela Kiono
2/19/2019	Chris Sokol
2/19/2019	Kate Ryan
2/19/2019	Ronald Ratner
2/19/2019	Susan Marone
2/19/2019	Margaret Brown
2/19/2019	Kim Koch



**Attachment C: Draft Proposed Order Comment Index**

<b>Date Received</b>	<b>Name</b>
2/19/2019	Rick Fencil
2/19/2019	Jennifer Graff
2/19/2019	Jennifer Dehart
2/19/2019	Frank Cassianna
2/19/2019	Sky Yeager
2/19/2019	Laurie Tabor
2/19/2019	Dan Howe
2/19/2019	Diane Van Ussel
2/19/2019	Mikki Chalker
2/19/2019	Annika Bruna
2/19/2019	Paul Kalka
2/19/2019	Robert Paulson
2/19/2019	Benjamin Mercer
2/19/2019	Deborah Dahlgren
2/19/2019	Roger Brewer
2/19/2019	Nancy Saphier
2/19/2019	Stanley Vejtasa
2/19/2019	John Selove
2/19/2019	Richard Eng
2/19/2019	Marilyn Mooshie
2/19/2019	Deborah Houshour
2/19/2019	David and Judith Berg
2/19/2019	Katherine Skirvin
2/19/2019	June Mohler Mitman
2/19/2019	Angelika Roll
2/19/2019	Charlotte Patterson
2/19/2019	Ellen Watrous
2/19/2019	Dan Sherwood
2/19/2019	Jennifer Hauge
2/19/2019	Nancy Brown
2/19/2019	Diana Kekule
2/19/2019	Robert Burch
2/19/2019	Dana Sewall
2/19/2019	Ricardo Lopez
2/19/2019	Marianne Nelson
2/19/2019	James Mulcare
2/19/2019	David Brewer
2/19/2019	Natalie Van Leekwijck
2/19/2019	Meagan Elizabeth Oltman
2/19/2019	Anita Youabian

**Attachment C: Draft Proposed Order Comment Index**

<b>Date Received</b>	<b>Name</b>
2/19/2019	Judy Miller-Lyons
2/19/2019	Debbie Williams
2/19/2019	Beaty Broughton
2/19/2019	Mary Hughes
2/19/2019	Jonathan Jelen
2/19/2019	Martha Thomae
2/19/2019	Vernon Batty
2/19/2019	Nancy Anderson
2/19/2019	Theresa Sanders
2/19/2019	Sabolch Horvat
2/19/2019	Lynn Mattson
2/19/2019	Lynne Ann Kogut
2/19/2019	Bob Hannigan
2/19/2019	Lisa Hammermeister
2/19/2019	Susan Morse
2/19/2019	Kenneth Lapointe
2/19/2019	Cathy Thomas
2/19/2019	Wesley E. Stoker
2/19/2019	Grace Neff
2/19/2019	Dana Bleckinger
2/19/2019	Karen Sjogren
2/19/2019	Stephen Oder
2/19/2019	Elizabeth A Lockwood
2/19/2019	Anne Bumbak
2/19/2019	Kristina Mabrey Lott
2/19/2019	Valerie Adell
2/19/2019	Nina Council
2/19/2019	Charles Townsend
2/19/2019	Lawrence Ludwicki
2/19/2019	John Nettleton
2/19/2019	Jane Beckwith
2/19/2019	Michael Millhollen
2/19/2019	Linda Gioia
2/19/2019	Linda Ferland
2/19/2019	Asmodeus Hru
2/19/2019	Pamela Eyde
2/19/2019	Michael Varichak
2/19/2019	Sandy Kuhns
2/19/2019	Sandra Woodall
2/19/2019	Lorenz Steininger

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<b>Date Received</b>	<b>Name</b>
2/19/2019	Carol Lemley
2/19/2019	Nanette Oggiono
2/19/2019	Pat A
2/19/2019	Susan Glarum
2/19/2019	Ted Lapage
2/19/2019	Barbara Blackwood
2/19/2019	Marie-José CHOBERT
2/19/2019	Katherine Anne Stansbury
2/19/2019	Pamela Miller
2/19/2019	Alyson Dal Ponte
2/19/2019	Elise Jardine
2/19/2019	Nancy Weil
2/19/2019	Bob Warren
2/19/2019	Elaine Lane
2/19/2019	Cheryl Weiss
2/19/2019	Deborah Voves
2/19/2019	Travis Allen
2/19/2019	Susan Drew
2/19/2019	Helen Caswell
2/19/2019	Kelly Kiraly
2/19/2019	Kathryn Lemoine
2/19/2019	Elizabeth Watts
2/19/2019	Stanley Perry
2/19/2019	Greta Rossi
2/19/2019	Kim Messmer
2/19/2019	Randall Gicker
2/19/2019	Gordon Holm
2/19/2019	Marsha Squibb
2/19/2019	Louise Alford
2/19/2019	Marian Cruz
2/19/2019	Barbara Ginsberg
2/19/2019	Diane Monico
2/19/2019	Gabrielle Karras
2/19/2019	Milton And Shirley Nelson
2/19/2019	Irmgard Guttersohn
2/19/2019	Alicja Nichols
2/19/2019	Annie Wei
2/19/2019	Loran Starr
2/19/2019	Lawrence Gordin
2/19/2019	Patricia Burton

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<b>Date Received</b>	<b>Name</b>
2/19/2019	Dennis Morley
2/19/2019	Christine Stewart
2/19/2019	Reverend Jane Eagle
2/19/2019	Cheryl Henley
2/19/2019	Robert M and Carol G Reed
2/19/2019	Sara Fogan
2/19/2019	Margaret Stephens
2/19/2019	Nancy Chismar
2/19/2019	Larry Callaway
2/19/2019	Joyce Robinson
2/19/2019	Marguery Lee Zucker
2/19/2019	Abbey Zap
2/19/2019	Cristen McConville
2/19/2019	Dennis Hebert
2/19/2019	Susanna Askins
2/19/2019	Lisa Daloia
2/19/2019	Bill Kucha
2/19/2019	Chris Scranton
2/19/2019	Susan Stevens-Briody
2/19/2019	Mark Rogers
2/19/2019	Valerie Bergeron
2/19/2019	Jacob Wallace
2/19/2019	Halsey Swain
2/19/2019	Christine Bennett
2/19/2019	Kristin Conley
2/19/2019	Christopher Toye
2/19/2019	Jessica Serna
2/19/2019	Linda Eisele
2/19/2019	Joann Koch
2/19/2019	Barbara Manildi
2/19/2019	Helen Klimeck-Jones
2/19/2019	Kacey Donston
2/19/2019	Meryle A. Korn
2/19/2019	Corina Aleman
2/19/2019	Nancy Porter
2/19/2019	Patricia Nazzaro
2/19/2019	Lenore Reeves
2/19/2019	Judy Genandt
2/19/2019	Lydia Garvey
2/19/2019	Carole Gardiner

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Date Received	Name
2/19/2019	Richard Martin
2/19/2019	Sandra Joos
2/19/2019	Michele Frisella
2/19/2019	Harry Wohlsein
2/19/2019	Jennifer Trotter
2/19/2019	Karla Watson
2/19/2019	Alicia Jackson
2/19/2019	Joanna Defelice
2/19/2019	Gail Massoll
2/19/2019	Mark Becker
2/19/2019	Cave Man
2/19/2019	Barbara Lamb
2/19/2019	Mary Garcia
2/19/2019	Valerie Hildebrand
2/19/2019	Michael Williams
2/19/2019	Valoree Hummel
2/19/2019	Susan Geer
2/19/2019	Sally Martin
2/19/2019	Susan Bechtholt
2/19/2019	Mitchell Dormont
2/19/2019	Mary Parham
2/19/2019	Scott Crockett
2/19/2019	Gabor Petry
2/19/2019	Casey Cunningham
2/19/2019	Sherry Dunn
2/19/2019	Ronald Du Pree
2/19/2019	Steve Aydelott
2/19/2019	Cathy Elizabeth Levin
2/19/2019	Tonya Rose
2/19/2019	John Woolley
2/19/2019	Brenda Kluhsman
2/19/2019	Justin Boucher
2/19/2019	Marisa Morales
2/19/2019	M.A. Kruse
2/19/2019	Lynn Jacobs McDonald
2/19/2019	Leland Block
2/19/2019	Jessica Jern
2/19/2019	Kim Kuehnert
2/19/2019	Susan Markowitz
2/19/2019	Kenneth Able

**Attachment C: Draft Proposed Order Comment Index**

<b>Date Received</b>	<b>Name</b>
2/19/2019	Susan Marsh
2/19/2019	Marshall Holloway
2/19/2019	Terry Tedesco-Kerrick
2/19/2019	Abby Hall
2/19/2019	Danika Esden-Tempski
2/19/2019	Julie du Bois
2/19/2019	Mari Dominguez
2/19/2019	Brianne Foster
2/19/2019	Lisa Billings
2/19/2019	Mika Gentili-Lloyd
2/19/2019	Don McKelvey
2/19/2019	Sandra Bader
2/19/2019	Regula Hess
2/19/2019	Mad Landis
2/19/2019	Barbara Arlen
2/19/2019	Monique Hall
2/19/2019	Carla Ralston
2/19/2019	John Livingston
2/19/2019	Jacklyn J Lowe
2/19/2019	Bartha Sjoerdsma
2/19/2019	Melissa Rehder
2/19/2019	Leslene Dunn Dunn
2/19/2019	J Stufflebeam
2/19/2019	John Pasqua
2/19/2019	Florinda Stroe
2/19/2019	Sandra Weber
2/19/2019	Jan Nelson
2/19/2019	Rob Seltzer
2/19/2019	Martin Albert
2/19/2019	Lynn Cardiff
2/19/2019	Cecile Valastro
2/19/2019	Patricia Gehring
2/19/2019	Tammy Bittler
2/19/2019	Michele Haudebourg
2/19/2019	Kristin McGee
2/19/2019	Andrew Nemec
2/19/2019	Joyce Hergenrader
2/19/2019	Michelle MacKenzie
2/19/2019	Silvia Bertano
2/19/2019	Nathan Wilson

**Attachment C: Draft Proposed Order Comment Index**

<b>Date Received</b>	<b>Name</b>
2/19/2019	Matt Freedman
2/19/2019	Barbara Traver
2/19/2019	Annie Ray
2/19/2019	Dawn Rasmussen
2/19/2019	Paula Jack-Fix
2/19/2019	Ero Gray
2/19/2019	Diane Craig
2/19/2019	Wayne&Carolyn Stewart
2/19/2019	Lee Siebert
2/19/2019	Rhett Lawrence
2/19/2019	Susan Geer
2/19/2019	Sammy Low
2/19/2019	Bill Kirkland
2/19/2019	Sue Kelso-Haines
2/19/2019	Eileen Sleva
2/19/2019	Linda Browning
2/19/2019	Jana Fussell
2/19/2019	Michael Wolf
2/19/2019	HM MM
2/19/2019	Bill Gardner
2/19/2019	Alex Prentiss
2/19/2019	Mr David Stone
2/19/2019	Barrett Edgar
2/19/2019	Jeanette Holmgren
2/19/2019	SABEL CERVERA
2/19/2019	Brigitte Vanbekbergen
2/19/2019	Astrid Keup
2/19/2019	Ellen Pfander
2/19/2019	Donna Tanner
2/19/2019	Sharon Wiebe
2/19/2019	Kay Kinsley
2/19/2019	Mahogany Aulenbach
2/19/2019	Catherine Edwards
2/19/2019	Ruth Griffiths
2/20/2019	Mark McCarron-Fraser
2/20/2019	Diane Monico
2/20/2019	Susan Palmiter
2/20/2019	Wayne Kelly
2/20/2019	Richard Osmun
2/20/2019	Christeen Anderson

**Attachment C: Draft Proposed Order Comment Index**

<b>Date Received</b>	<b>Name</b>
2/20/2019	Carole Klumb
2/20/2019	Lisa Salazar
2/20/2019	Susan Croissant
2/20/2019	Erin Barca
2/20/2019	Larry Martin
2/20/2019	John Herberg
2/20/2019	Rebecca Hollenbeck
2/20/2019	Brian Paradise
2/20/2019	Diane Daiute
2/20/2019	Kelly Ohanley
2/20/2019	Sherri Gallant
2/20/2019	Wendy Forster
2/20/2019	Jeannine Florance
2/20/2019	Maryann Smale
2/20/2019	Nancy Merrick
2/20/2019	Geoff King
2/20/2019	Peter Ryan
2/20/2019	Peggy Tribble
2/20/2019	Bob Karcich
2/20/2019	Joann Fechner
2/20/2019	Chris Washington
2/20/2019	Nicholas Chatfield
2/20/2019	kate cassidy
2/20/2019	James Miller
2/20/2019	Arry Pirwitz
2/20/2019	Chelsea Hernandez
2/20/2019	Karen Griswold
2/20/2019	Henry Garrison
2/20/2019	Joan Walker
2/20/2019	Tami Palacky
2/20/2019	Lois Yuen
2/20/2019	Bill Gardner
2/20/2019	Mavis Kvernvik
2/20/2019	JoAnn Marlette
2/20/2019	Barrett Edgar
2/20/2019	Philip Randall
2/20/2019	Eve Saglietto
2/20/2019	Sally Stevens
2/20/2019	Luan Pinson
2/20/2019	J. David Scott



**Attachment C: Draft Proposed Order Comment Index**

<b>Date Received</b>	<b>Name</b>
2/20/2019	Flavia Pellizzari
2/20/2019	Janine Vinton
2/20/2019	Lois Bernard
2/20/2019	Sherry Palmer
2/20/2019	Judith Hazelton
2/20/2019	Brigitte Maria Evans
2/20/2019	sau tsang
2/20/2019	Rainy Miatke
2/20/2019	Ven. Satya Vayu
2/20/2019	C.K. Ellis
2/20/2019	jules moritz
2/20/2019	Dorinda Kelley
2/20/2019	Sharon Fuller
2/20/2019	Carla Wenzlaff
2/20/2019	Sue Craig
2/20/2019	Marc Kitaen
2/20/2019	Maureen O'Neal
2/20/2019	Ginger Hipszky
2/20/2019	Kellie Smith
2/20/2019	Gary Landers
2/20/2019	Cheryl Krause
2/20/2019	Lynn Killam
2/20/2019	Maureen O'Neal
2/20/2019	Jean Ella
2/20/2019	Jamie Harris
2/20/2019	H Brown
2/20/2019	Dawn Smallman
2/20/2019	Paulette SwitzerTatum
2/20/2019	Patricia Mizutani
2/20/2019	Lori Consaga
2/20/2019	Michael Foster
2/20/2019	Marion Kreuscher
2/20/2019	Sanand Dilip
2/20/2019	Kim Beck
2/20/2019	Terrie Phenicie
2/20/2019	Justin Loveland
2/20/2019	Liliana fiorini
2/20/2019	katherine Sampson
2/20/2019	Kyenne Williams
2/20/2019	Ali Van Zee

**Attachment C: Draft Proposed Order Comment Index**

<b>Date Received</b>	<b>Name</b>
2/20/2019	Charlotte Maloney
2/20/2019	Laurie Perry
2/20/2019	Judy Jordan
2/20/2019	John Milbert
2/20/2019	Kim Zwicker
2/20/2019	Nathan Baker, Senior Staff Attorney Friends of the Columbia Gorge
2/20/2019	Kenneth Shawn Smallwood, PhD
2/20/2019	Matthew Barmann
2/20/2019	Mrs. Amber Davidson
2/20/2019	Tammy Smith
2/20/2019	Marilyn Costamagna
2/20/2019	Deb Merchant
2/20/2019	Sandra Mann
2/20/2019	Dominique LANG
2/20/2019	Ann Marie Sardineer
2/20/2019	Diane Craig
2/20/2019	Gail Harris
2/20/2019	Joanna Hardeman
2/20/2019	JR DuBois
2/20/2019	Albeniz Perez
2/20/2019	Susan H
2/20/2019	Corine Cathala
2/20/2019	Rhea Shapiro
2/21/2019	Kim Zwicker
2/21/2019	Fuji Kreider
2/21/2019	P. Sydney Herbert
2/21/2019	David Williams
2/21/2019	John Wood
2/21/2019	David Williams
2/21/2019	Ronna Friend
2/21/2019	Peter Cornelison
2/21/2019	Sandy Killen
2/21/2019	Jim Kreider
2/21/2019	C. Fuji Kreider
2/21/2019	Koirna Rigglin
2/21/2019	Carolyn and Wayne Stewart
2/21/2019	Bruce Lumper
2/21/2019	Dave Potter
2/21/2019	Jill Barker

**Attachment C: Draft Proposed Order Comment Index**

<b>Date Received</b>	<b>Name</b>
2/21/2019	Irene Gilbert
2/21/2019	Ryan Rittenhouse Friends of the Columbia Gorge
2/21/2019	John Schwartz
2/21/2019	John Wood
2/22/2019	Eric Quaempts, Natural Resource Director, CTUIR

## **Attachment D: Draft Habitat Mitigation Plan**

**Draft Habitat Mitigation Plan  
for the  
Summit Ridge Wind Project  
(As Amended)**

January 2019

## **Introduction**

The Summit Ridge Wind Project is approved to be located in Wasco County, Oregon. As part of the Application for Site Certificate (ASC) (Exhibits P and Q) and subsequent amendment requests, Northwest Wildlife Consultants, Inc. (NWC) completed habitat mapping and quality assessment of the facility area, and conducted site-specific biological studies that included rare plant surveys, avian use surveys, a grassland bird displacement study, special status vertebrate wildlife species surveys, a raptor nest survey, an inventory of bat species, big game observations, as well as reviews for potential occurrence of or records of special status species (Gerhardt et al., 2009a, 2009b).

## **Description of Project Impacts**

The Summit Ridge Wind Project is approved to consist of up to 72 turbines and is approved to generate 194.4 megawatts (MW). Other associated facilities include collector lines and substation, turbine pads, maintenance roads, an operations and maintenance building, and one 230-kilovolt overhead transmission line.

The facility's footprint (area to be covered by permanent facilities) will occupy approximately 42 acres of dryland agriculture, which is Category 6 habitat, and approximately 26 acres of Category 2 (big sagebrush shrub-steppe; and mapped mule deer and/or elk winter range habitat, which overlaps revegetated grassland, native perennial grassland, and rabbitbrush/buckwheat shrub-steppe habitat types) (see attached habitat mapping figures). No Category 1 habitat will be impacted.

In addition to the permanent impacts mentioned above, construction of the facility will entail temporary impacts to the same types and categories of habitat. Temporary impacts are summarized as follows: no Category 1 impacts, approximately 36 acres of impact to Category 2 habitat, and approximately 47 acres of impact to Category 6 habitat.

Grassland habitats (revegetated grassland and native perennial grassland) are expected to require two to five years after restoration activities start to achieve a trend towards recovery to a mature state of grassland cover. Old field and exotic annual grassland habitats are expected to be improved—within two or three years—as restoration will result in more native grasses and far fewer of the invasive, noxious weeds that existed prior to disturbance). Native forbs in perennial grasslands (as well as in shrub-steppe) may not recover to pre-construction diversity or will take longer to recolonize the restored areas. Shrub-steppe habitats may take much longer to achieve the shrub species maturity and height that existed prior to construction.

## **Calculation of the Size of the Mitigation Area**

The Habitat Mitigation Area (HMA) must be large enough and have the characteristics to meet the standards set by the Oregon Department of Fish and Wildlife (ODFW) in their Wildlife Habitat Mitigation Policy (OAR 635-415-0025). These standards include "no net loss" and a "net benefit" in habitat quality and quantity for Category 2 habitats, and "no net

loss" of habitat for Categories 3 and 4. However, as noted above, temporary and permanent impacts would occur within Category 2 habitat.

Temporary impacts are mitigated through revegetation, as discussed within the Summit Ridge Revegetation and Weed Control Plan. However, in addition to revegetation activities, temporary impacts to habitat that last longer than one life cycle, for the shortest-lived species that depend on the affected habitat, are considered to be "temporal" in nature. A certificate holder is obligated to mitigate for the temporal loss, or the duration of time necessary for habitat recovery, associated with temporary habitat impacts. As presented below, the certificate holder voluntarily proposes to mitigate temporary impacts, regardless of the habitat subtype, as a permanent impact within the mitigation site.

For the purposes of this discussion, the acreages of impact are the current estimate of the maximum affected area. The actual areas of disturbance will be determined based on the final design layout of the facility. ODOE and ODFW will require that the final design layout and the associated impact acreages be provided for agency review and approval prior to the beginning of facility construction.

Current maximum habitat impact estimates of the Summit Ridge Wind Project (including the transmission line) are:

<u>Habitat Category</u>	<u>Permanent Impacts</u>	<u>Temporary Impacts</u>
Category 2 (traditional)	0.43	0.37
Category 2 (big game)	25.80	35.15
Category 6*	41.78	47.16
Total Acres	68.01	82.68

\* no mitigation required

Based on these impact estimates, calculation of the mitigation area requirement is as follows:

#### Category 2 (Traditional)

Permanent Impacts: 0.43 acres (2:1 ratio)

Temporal Impacts: 0.37 acres (2:1 ratio)

Mitigation area required:  $(0.43 \times 2) + (0.37 \times 2) = 1.60$  acres

#### Category 2 (Big Game)

Permanent Impacts: 25.80 acres (>1:1 ratio)

Temporary/Temporal impacts: revegetated grassland 17.19 acres (1:1); native perennial grassland and shrub-steppe 6.23 acres (1:1 ratio); old field and exotic annual grassland 10.86 acres (1:1)

Mitigation area required:  $25.80 + 17.19 + 6.23 + 10.86 = > 60.08$  acres

**Total mitigation area required: Approximately 65 acres (i.e., > 61.68 acres)**

## **Description of the Habitat Mitigation Area (HMA)**

According to ODFW standards, areas appropriate for mitigation of Category 2 habitat impacts must be “in proximity” to the facility and have potential for habitat and enhancement. The certificate holder has identified four habitat parcels for consideration by ODFW and ODOE (see attached HMA figures). These range in size from 15 to 77 acres, and are generally composed of revegetated grasslands of varying quality. The identified parcels have adequate potential to mitigate the habitat loss expected to occur from the construction and operation of the facility, and are expected to provide benefit for the wildlife species most likely to be impacted by habitat loss associated with the facility, including grasshopper sparrow (*Ammodramus savannarum*), Brewer’s sparrow (*Spizella breweri*), vesper sparrow (*Pooecetes gramineus*), and loggerhead shrike (*Lanius ludovicianus*). The referenced parcels for mitigation have been discussed with ODFW, Pattern Energy Group, and the associated landowners, and other parcels may be considered as well. As provided within the *Final Order on Amendment 4*, Condition 10.4 was amended to require a habitat assessment of the proposed mitigation sites prior to construction. The certificate holder must demonstrate that the proposed mitigation sites maintain sufficient quality and quantity of habitat to offset permanent and temporary habitat impacts.

If the previously proposed mitigation sites (as discussed above) are determined not to have sufficient quality and quantity of habitat to meet ODFW’s mitigation goals for the permanent and temporal habitat impacts from facility construction, the certificate holder would be obligated to identify new mitigation areas. In determining the sufficiency of a proposed mitigation site, ODOE in consultation with ODFW, reviews the following criteria:

- A quantitative comparison of acreage to ensure no net loss of habitat. As clarification, the Department will review to ensure that the proposed mitigation site is equivalent to or greater than the impacted acreage and that there is a high probability of successful habitat enhancement or restoration.
- A comparison to ensure that the mitigation site adequately replaces the “functions and values” impacts from the construction and operation of the facility. This evaluation will be aided through a qualitative assessment made by an ODFW district biologist.
- Whether the proposed mitigation site is severely impacted by either noxious weeds or erosion.
- Whether the proposed mitigation site is in immediate threat of habitat loss or degradation.
- Whether the mitigation site will be available through the expected lifetime of the facility. For instance, the mitigation site should held under a conservation easement, fee title, or other legal claim.
- Mitigation sites that are connected to public lands or a natural wildlife area, which allow wildlife to migrate between habitats, are preferred.



## **Habitat Enhancement Options**

It is assumed that the habitat designated for mitigation will be conserved and protected from alteration for the life of the facility. Besides such legal protection, actions that are proposed for enhancement of the mitigation area include fencing out livestock (if not already fenced), modification of livestock grazing (wildlife habitat values take precedence over livestock grazing), weed control, revegetation with native plants, and fire control.

### **Modification of Livestock Grazing Practices**

The certificate holder may restrict grazing within the habitat mitigation area. Eliminating livestock grazing within the mitigation area during most of the year will enable recovery of native bunchgrass and sagebrush in areas where past grazing or recent wildfires have occurred, resulting in better vegetative structure and complexity for a variety of wildlife. Reduced livestock grazing may be used as a vegetation management tool, limited to the period from February 1 through April 15.

### **Shrub Planting**

The certificate holder may plant sagebrush shrubs in locations where existing sagebrush is stressed or where recent wildfires have occurred. The certificate holder shall determine the size of the shrub-planting areas based on the professional judgment of a qualified biologist after a ground survey of actual conditions. The size of the shrub-planting areas will depend on the available mitigation area and opportunity for survival of planted shrubs. The shrub survival rate at four years after planting is an indicator of successful enhancement of habitat quality to Category 2. The certificate holder shall plant at least 2 acres of sagebrush on a total of at least 10 acres. The certificate holder shall complete the initial sagebrush planting within one year after the beginning of construction. Supplementing existing, but disturbed, sagebrush areas with sagebrush seedlings would assist the recovery of this valuable shrub-steppe component. The certificate holder shall obtain shrubs from a qualified nursery or grow shrubs from native seeds gathered from the mitigation area. The certificate holder shall identify the area to be planted with sagebrush shrubs after consultation with ODFW and subject to final approval by the Department. The certificate holder shall mark the planted sagebrush clusters at the time of planting for later monitoring purposes and shall keep a record of the number of shrubs planted.

### **Weed Control**

The certificate holder may implement weed control measures within the habitat mitigation area. Control will be accomplished through use of herbicides targeted to the individual weed species, hand eradication, mowing, and use of fabric mulch or biobarriers. These approaches shall be considered on a site-specific basis, and applied by professionals trained to identify exotics for selective plant management. All chemical applications shall be made by licensed, trained and certified professionals, in accordance with strict health and safety procedures and with practices that comply fully with state and federal regulations. Use of Plateau® as a pre-emergent should be done with caution, as it may have an adverse effect on desired grasses where the seed was broadcast or hydraulically applied (i.e.,

no separation between seed and soil treated with Plateau®). It may be appropriate to experiment in some locations with Plateau® applied at a rate (or rates) substantially less than the six ounce rate recommended by the manufacturer for cheatgrass control in established rangelands.

### **Native Plant Revegetation**

The certificate holder may increase vegetative cover, relative to the structure prior to initiation of enhancement actions, of desired native vegetation (i.e. native forbes and bunchgrasses). The certificate holder shall choose planting methods based on site- specific factors such as slope, erosion potential, and the size of the area in need of revegetation.

### **Fire Control**

The certificate holder shall implement a fire control plan for wildfire suppression within the mitigation area. The certificate holder shall provide a copy of the fire control plan to ODOE before starting habitat enhancement actions. The certificate holder shall include in the plan appropriate fire prevention measures, methods to detect fires that occur and a protocol for fire response and suppression. The certificate holder shall maintain fire control for the life of the facility. If any part of the mitigation area is damaged by wildfire, the certificate holder shall assess the extent of the damage and implement appropriate actions to restore habitat quality in the damaged area.

### **Monitoring**

It is expected that a comprehensive program of monitoring the HMA and the success of its protection and enhancements will be required by ODOE and ODFW. The certificate holder is required to finalize the monitoring protocol for the HMA prior to construction (see Condition 10.4). Such monitoring will be conducted by an independent and qualified specialist (wildlife biologist/botanist). Annual monitoring will include assessments of quality of vegetation, success of weed control measures, recovery of native grasses and forbs (in response to reductions in livestock grazing), and success of revegetation measures (where applicable). In addition, some requirement for periodic monitoring of avian species use of the area (especially during the breeding season) is recommended for understanding the enhancement success. Details of monitoring time frames and success criteria will be designed after the final site is selected.

Results of all monitoring will be reported to ODOE and ODFW on an annual basis, along with a report of the mitigation/enhancement measures undertaken that year.

### **Criteria for Success**

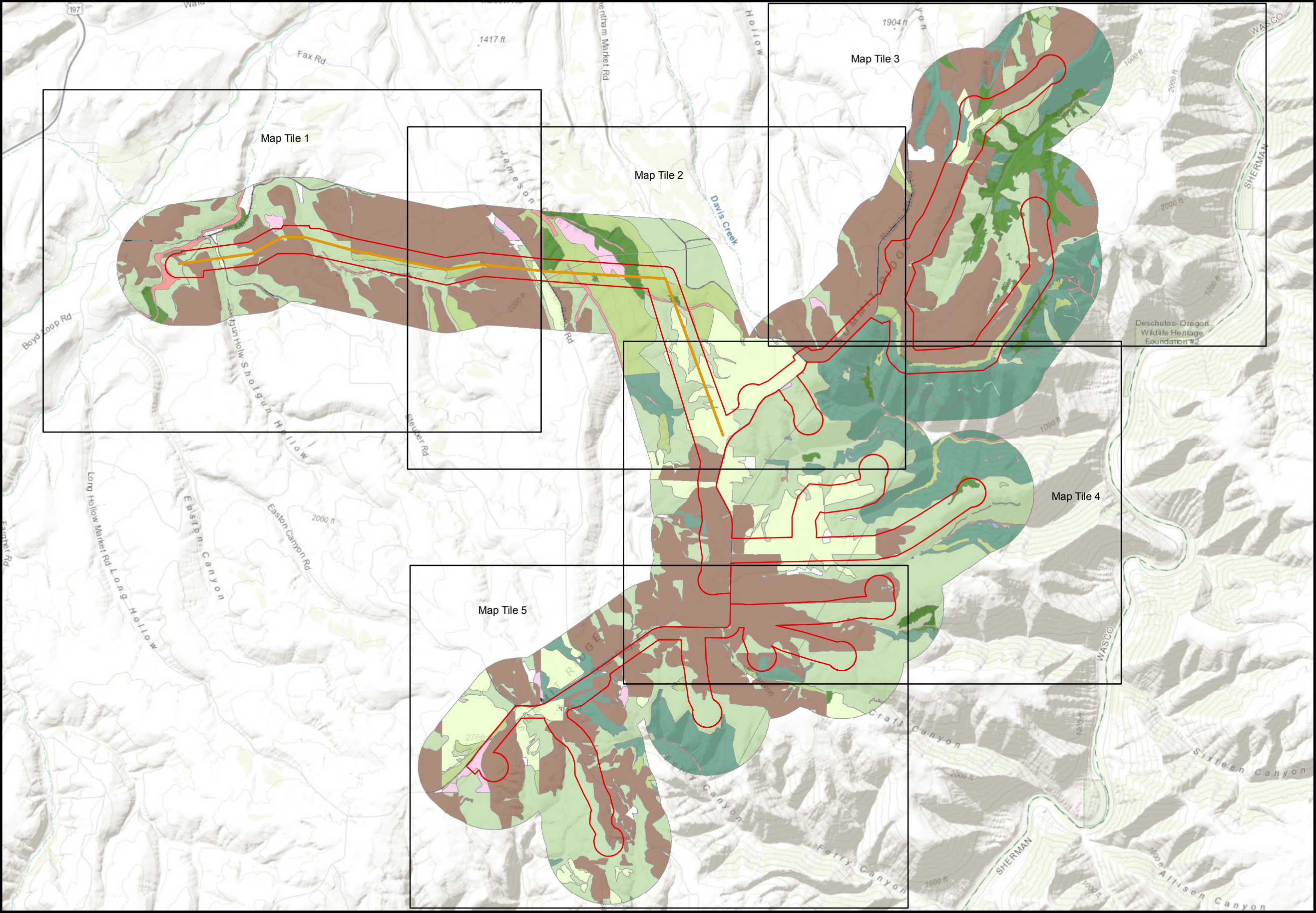
Success of this Habitat Mitigation Plan will be predicated upon several criteria. These include increased vegetative cover consisting of desired native vegetation (relative to the structure prior to initiation of enhancement actions), similar or increased avian use of the area (similar or increased diversity of species), success of noxious weed control, increased recruitment of native forbs, and increased seed production of native bunchgrasses. The

certificate holder is required to finalize the methodology for measuring and quantifying the success criteria prior to construction (see Condition 10.4).

## **References**

- Gerhardt, R., R. Gritski, B. Anderson. 2009a. Ecological baseline studies and impact assessment for the Summit Ridge Wind Power Project, Wasco County, Oregon—Interim Report. Prepared for LotusWorks, Vancouver, Washington. Prepared by Northwest Wildlife Consultants, Pendleton, Oregon.
- Gerhardt, R., R. Gritski, B. Anderson. 2009b. Ecological baseline studies and impact assessment for the Summit Ridge Wind Power Project, Wasco County, Oregon—Addendum. Prepared for LotusWorks, Vancouver, Washington. Prepared by Northwest Wildlife Consultants, Pendleton, Oregon.
- Oregon Department of Fish and Wildlife (ODFW). 2013. ODFW's data clearinghouse: ODFW winter range for eastern Oregon. Available online at:  
<http://nrimp.dfw.state.or.us/DataClearinghouse/default.aspx?p=202&XMLname=885.xml>.





**Figure 1**  
**PATTERN ENERGY**  
**Summit Ridge**  
**Habitat Categorization**  
**Overview Map**  
  
Wasco County, OR  
October 2018

- Transmission Route from substation to BPA 87WTG
- Site Boundary
- Habitat Type**
- Big Sagebrush Shrub-steppe
  - Dryland Wheat or Other Small Grain
  - Escarpment
  - Exotic Annual Grassland
  - Farmyard or Residence
  - Native Perennial Grassland
  - Old Field
  - Pond
  - Quarry
  - Rabbitbrush/Buckwheat Shrub-steppe
  - Revegetated Grassland
  - Riparian
  - Shrublands/Woodland
  - Riparian Woodland
  - Road
  - Talus

\*Habitat categorization provided by Northwest Wildlife Consultants (personal communication from Rick Gearhart, Oct. 16, 2018), supplemented by desktop analysis for selected areas along the transmission line corridor and outside the southeastern portion of the lease boundary conducted by Tetra Tech (October 2018).





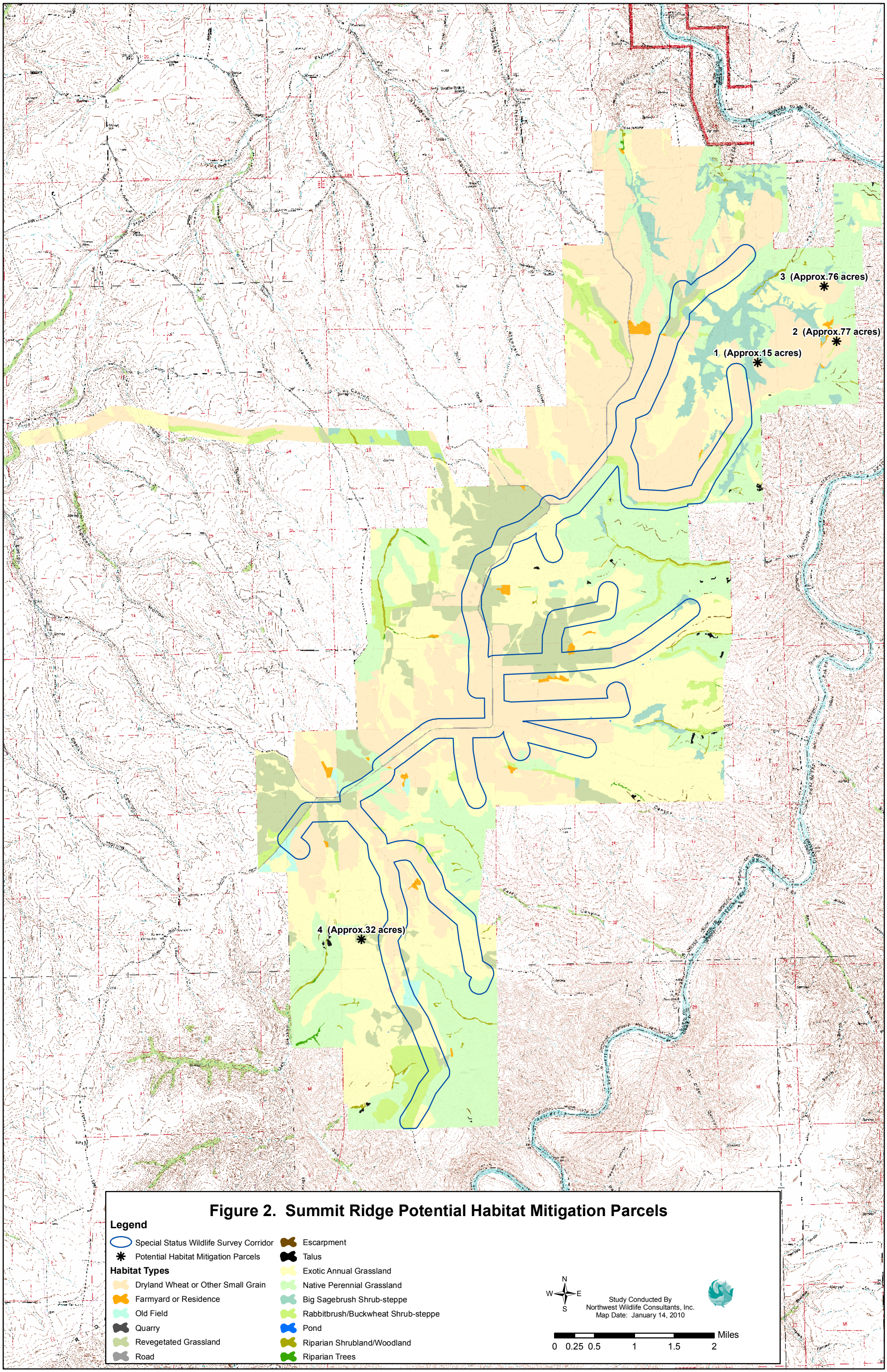


Figure 2. Summit Ridge Potential Habitat Mitigation Parcels

Legend

- Special Status Wildlife Survey Corridor
- Potential Habitat Mitigation Parcels
- Habitat Types**
  - Dryland Wheat or Other Small Grain
  - Farmyard or Residence
  - Old Field
  - Quarry
  - Revegetated Grassland
  - Road

- Escarpment
- Talus
- Exotic Annual Grassland
- Native Perennial Grassland
- Big Sagebrush Shrub-steppe
- Rabbitbrush/Buckwheat Shrub-steppe
- Pond
- Riparian Shrubland/Woodland
- Riparian Trees

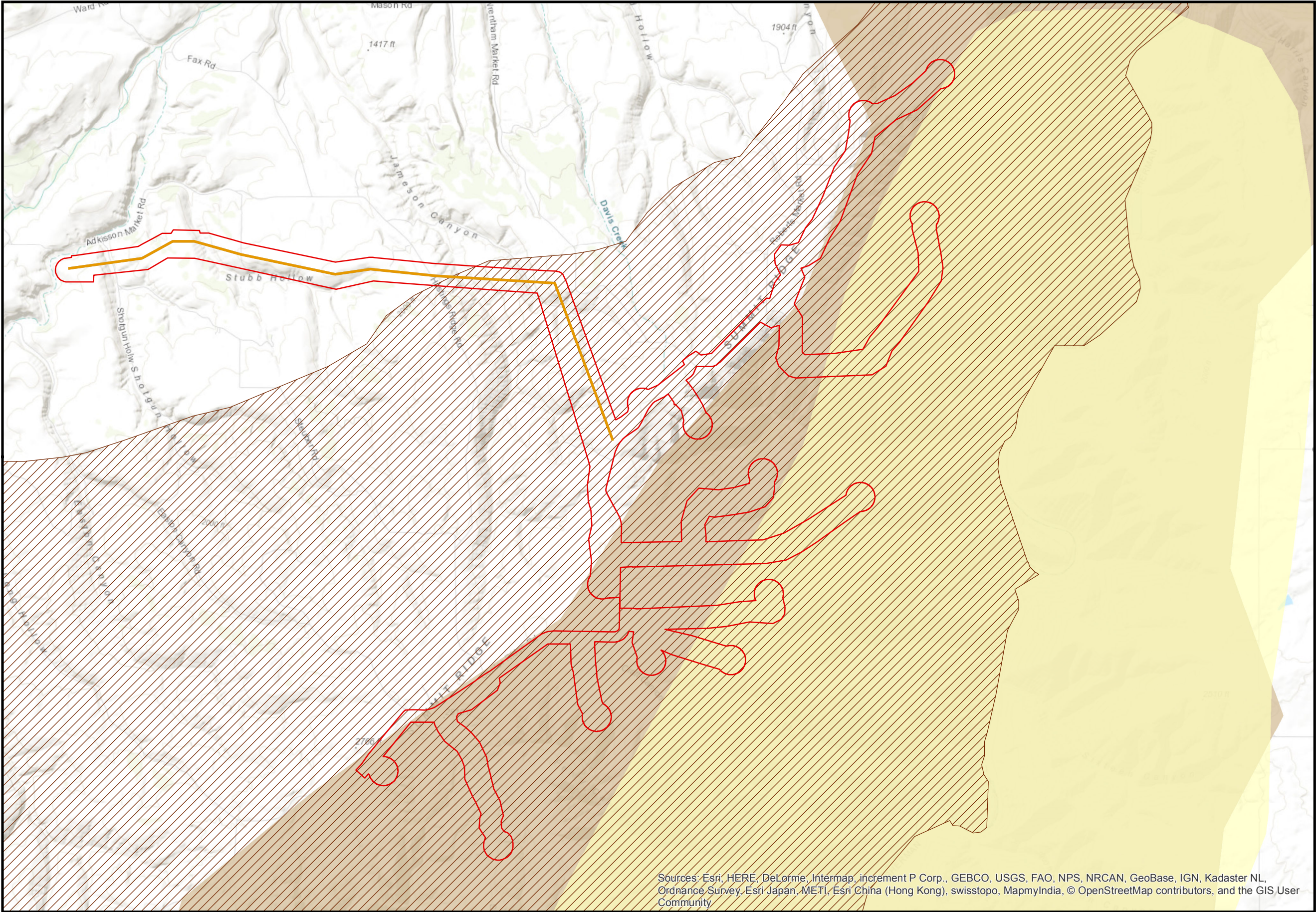


Study Conducted By  
Northwest Wildlife Consultants, Inc.  
Map Date: January 14, 2010



0 0.25 0.5 1 1.5 2 Miles





Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community

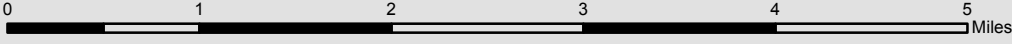
**Figure 3**  
**PATTERN ENERGY**  
**Summit Ridge**  
  
**Big Game**  
  
Wasco County, OR  
October 2018

-  Elk Winter Range
-  Deer Winter Range
-  Bighorn Herd Range
-  Transmission Route from substation to BPA 87WTG
-  Site Boundary



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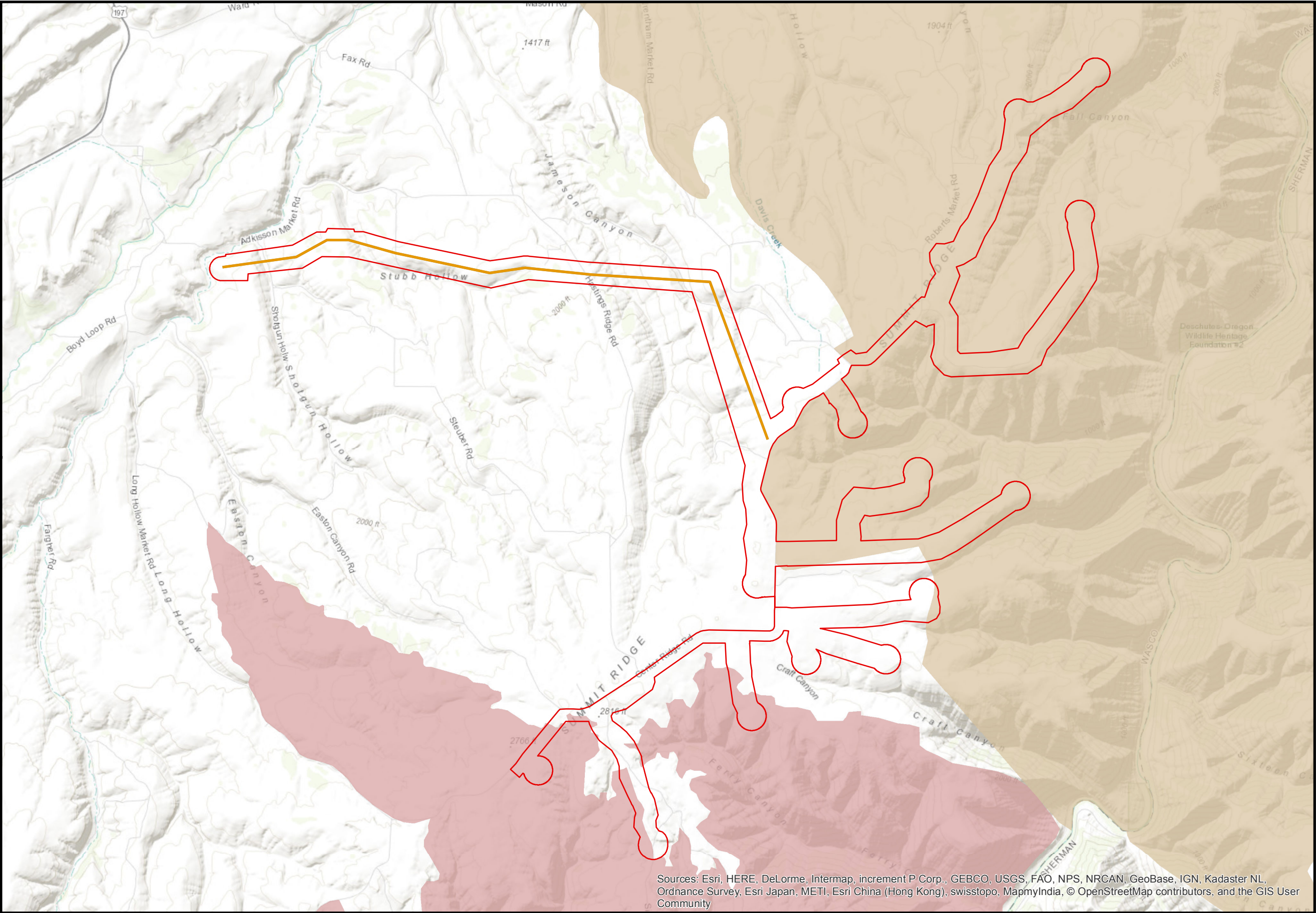
WGS84 UTM 10



**Data Sources** ESRI 2007: roads, hydrography / USDA NAIP 2010: air photo / Pattern Energy : project infrastructure







Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community

Figure 4

PATTERN ENERGY  
Summit Ridge

Wildfire Map

Wasco County, OR  
October 2018

Long Hollow Wildfire Boundary

Transmission Route from substation to BPA 87WTG

Site Boundary

Substation Wildfire Boundary

Pattern Development

Tt TETRA TECH

1:63,360    WGS84 UTM 10

0    1    2    3    4 Miles

Data Sources    ESRI 2007: roads, hydrography / USDA NAIP 2010: air photo / Pattern Energy : project infrastructure

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## **Attachment E: Draft Revegetation and Weed Control Plan**

(As amended in Final Order on Amendment 4)



# Summit Ridge Wind Farm: Draft Revegetation and Weed Control Plan

## 1. Introduction

This Revegetation and Weed Control Plan ("Plan") describes the methods and standards to restore temporarily disturbed areas from construction of the Summit Ridge Wind Farm (Summit Ridge).<sup>1</sup> The certificate holder is not required to restore areas occupied by permanent facility components (the "footprint") under this Plan.

Revegetation and restoration measures are designed to support wildlife habitat, control erosion, and mitigate against the invasion of noxious weed species into newly disturbed areas. Where vegetation has been damaged or removed during construction, the certificate holder must restore suitable vegetation to pre-disturbance condition or better. In addition, the certificate holder shall maintain erosion and sediment control measures implemented during the construction phase, until the affected areas are restored as described within this Plan, and the risk of erosion has been eliminated. The overall goal of this Plan is to return temporarily disturbed habitat to as close to pre-construction conditions as possible. The Plan contains the following objectives:

- Promote recovery of disturbed areas;
- Re-establish native plant communities in non-cultivated areas and re-establish regular farming practices in cultivated areas;
- Control the introduction and spread of undesirable plants;
- Protect the site from erosion; and
- Support existing wildlife habitat.

These objectives will be achieved by a combination of techniques, including, but not limited to the following:

- Installing and maintaining appropriate erosion control best management practices (BMPs) and construction limit staking per the Oregon Department of Environmental Quality (DEQ) 1200-C permit;
- Revegetation of non-cultivated disturbed areas with native grasses and forbs (flowering plants) and resuming crop production in cultivated areas;
- Controlling weed germination and growth during and after construction; and
- Establishing a regular monitoring program during and after construction to ensure the continued successful development of restored areas, and to quickly identify new populations of weeds.

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<sup>1</sup> This plan is incorporated by reference in the site certificate for Summit Ridge and must be understood in that context. It is not a "stand-alone" document. This plan does not contain all mitigation required of the certificate holder.

## 2. Facility Description and Habitat Inventory

Summit Ridge Wind, LLC (certificate holder) received a Site Certificate from the Energy Facility Siting Council in 2011, which authorized the construction and operation of a 194.4 megawatt (MW) wind energy generation facility in Wasco County, Oregon. The facility is located approximately 17 miles southeast of The Dalles and eight miles east of Dufur. In addition to the turbine strings, additional facilities such as access roads, underground and overhead transmission lines, and a substation are included within the facility site boundary.

The goal of this plan is to return temporarily disturbed habitat areas (such as road shoulders, underground electric cable trenches, and temporarily disturbed areas around tower sites) to a condition that is commensurate to, or better than, pre-construction conditions. Habitat areas temporarily disturbed, by habitat category and subtype, are presented in Table 1 below.

**Table 1: Estimate of Temporary Habitat Impacts,  
by Habitat Category and Subtype<sup>2</sup>**

Habitat Category and Subtype	Acres
<b>Category 2</b>	
Shrub-steppe – Big Sagebrush Shrub Steppe	0.37
<b>Category 2 – Big Game Winter Range</b>	
Developed/Disturbed Revegetated Grassland	18
Grassland – Native Perennial Grassland	6.69
Shrub-steppe – Rabbit/Buckwheat Shrub-steppe	3.34
<b>Category 2 – Big Game Winter Range</b>	
Developed/Disturbed – Old Field	0.67
Grassland – Exotic Annual Grassland	19.09
<b>Total Temporary Impacts to be Revegetated =</b>	
<b>48.16</b>	
*To be updated during pre-construction, based on final facility design.	

As demonstrated by the table above, construction of the facility would temporarily impact approximately 48.16 acres of habitat.

## 3. Revegetation Procedures (Temporarily Disturbed Areas)

The following methods and protocol are to be followed for all areas of temporary ground and/or vegetation disturbance in the upland habitats throughout the site boundary.

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<sup>2</sup> Note that temporarily impacted habitat includes Category 3 and 4, but is considered Category 2 habitat based on the presence of Big Game Winter Range habitat.

### 3.1 Pre-Disturbance Wildlife Habitat Vegetation Assessment

The site certificate for the facility requires restoration of disturbed areas to satisfy the requirements of the Fish and Wildlife Habitat standard (OAR 345-022-0060), which aligns with the mitigation goals and policies within the ODFW Fish and Wildlife Habitat Mitigation Policy (OAR 635 Division 415). In order to meet the ‘no net loss of habitat quality’ goal of the mitigation policy, the certificate holder shall revegetate disturbed areas according to a set of agreed-upon success criteria that return the site to pre-disturbance condition.

Revegetation success is measured at approved, fixed-point pairs of reference and monitoring sites within the disturbed area. Reference sites are used as a proxy for pre-disturbance condition while accounting for changes not within control of the certificate holder, such as climatic variability and landscape-scale shifts in plant communities. As presented in Table 1, the following Category 2 habitat subtypes would be temporarily disturbed during construction: Shrub-steppe (Big Sagebrush); Developed / Disturbed Revegetated Grassland; Grassland – Native Perennial Grassland; Shrub-steppe (Rabbit / Buckwheat); Developed / Disturbed – Old Field; and Grassland – Exotic Annual Grassland. Therefore, at a minimum, the certificate holder shall identify six paired monitoring and reference site locations. However, it is recommended to identify many monitoring sites per reference site, within areas of distinct habitat, as necessary for statistical rigor.

Prior to facility construction, the certificate holder shall identify paired monitoring and reference sites in consultation with ODFW and the Department. Reference sites should be identified that closely resemble the pre-disturbance characteristics of the revegetation area monitoring site as indicated by site conditions, including vegetation density, relative proportion of desirable vegetation and species diversity of desirable vegetation. “Desirable vegetation” is defined as those species included in the seed mix or native or native-like species, excluding noxious weeds. The certificate holder shall consider land use patterns, soil type, local terrain and noxious weed densities in selecting paired monitoring and reference sites. After the paired monitoring and reference sites are selected by the certificate holder and approved by the Department and ODFW, these sites shall remain in the same location unless approval is obtained by the Department and ODFW.

Pre-disturbance wildlife habitat conditions of the paired monitoring and reference sites shall be determined based on a pre-construction vegetation inventory, to be conducted by a qualified biologist. The pre-construction wildlife habitat vegetation assessment shall include:

- The ODFW habitat category for the area disturbed (Consistent with the evaluation approved per Condition 10.1)
- Photos representing the habitat,
- Vegetation density (percent cover, percent bare ground, percent cover by plant species)
- Vegetation structural stage, slope, soil type
- An assessment of the relative proportion of desirable vegetation as determined by the average number of stems of desirable vegetation per square foot or by a visual scan of the area, noting overall recovery status.

- As assessment of species diversity of desirable vegetation.

The pre-disturbance vegetation inventory shall be submitted for review and approval by the Department, in consultation with ODFW prior to the agency consultation described in Section 3.2 of this plan.

### 3.2 Pre-Revegetation Agency Consultation

Prior to construction, the certificate holder shall consult with ODFW, ODOE, and the Wasco County Weed Control Authority to discuss its pre-disturbance vegetation inventory, which must include habitat category and habitat subtype conditions, paired monitoring and reference site locations, conditions, revegetation methods, erosion and sediment control measures, and an implementation schedule.

Six months prior to commercial operation, the certificate holder will meet with ODFW, ODOE, and Wasco County Weed Control Authority to review the actual extent and conditions of temporarily disturbed areas, confirm that the revegetation methods agreed upon during pre-construction review are still appropriate, and to re-visit reference and monitoring sites.

### 3.3 Revegetation Methods

Revegetation of temporarily disturbed areas will include several important aspects, including topsoil management, selection of an appropriate seed mix, and control of noxious and other undesirable plant species. The certificate holder shall choose planting methods based on site-specific factors such as slope, erosion potential, and the size of the area in need of revegetation. Disturbed ground may require chemical or mechanical weed control before weeds have a chance to go to seed.

#### 3.3.1 Topsoil Management and Decompaction

The certificate holder shall restore topsoil to pre-construction condition or better. Preservation and/or replacement of native topsoil not only ensures a healthy, nutrient-rich seed bed, but also incorporates the native seed bank, increasing overall species richness and potential for full recovery of the site to natural conditions. Areas without sufficient topsoil recover at a slower rate, and tend to be colonized by exotic species much sooner, than areas with native topsoil.

During construction, topsoil should be kept in place where possible. Where it is necessary to remove topsoil, it shall be stockpiled in appropriate locations and protected with erosion control BMPs per the DEQ 1200-C permit. Stockpiled topsoil shall be windrowed inside of the clearing limits, kept separate from subsoil, and protected from wind and water erosion. If topsoil is removed from its place of origin, it shall be labeled and tracked so that it may be replaced appropriately prior to commencement revegetation.

Another contributing factor to restoration success is the condition of the seed bed at the time of seeding. Compacted soil does not provide an optimal environment for seed germination and establishment, but can instead lead to a lack of vegetative cover and thus increased erosion potential over time. In preparation for seeding activities, areas compacted by construction activities shall be ripped to a depth of 12" where feasible and roughened to provide maximum seed-soil contact.

### 3.3.2 Seed Mixture

The facility is expected to result in temporary disturbance to approximately 48.16 acres of non-agricultural land, subject to verification as part of the preconstruction habitat assessment required per Condition 10.1. The certificate holder will reseed this area after construction during the period from September to April of any given year to ensure sufficient soil moisture for germination and plant establishment. One seed mixture was developed for use in the revegetation of all temporarily disturbed habitats within the site boundary (Table 2). This seed mixture will be used, unless an alternative mixture is requested by a landowner, or agency biologist. The certificate holder will submit a request for approval from the Department, in consultation with ODFW, for any alternative mixture. To re-establish plant communities of most value to wildlife, native species are included in the seed mixture, as well as certain non-native species that ODFW has determined to be beneficial to wildlife. Species were selected based on a variety of factors including tolerance to xeric conditions and seed availability.

Plant materials (seed and nursery stock) used in revegetation must be adapted to the conditions of the site in order to have the best chance of germination and long-term survival. All plant materials shall meet the following requirements, pending approval by ODFW and the Wasco County Weed Department:

- Seed and nursery stock shall be "source identified". The original source for the plant material should be Columbia Plateau Ecoregion (north-central Oregon State). The seed should be a locally adapted biotype, adapted to conditions similar to the project site.
- Seed shall be certified "weed free", indicating there are no noxious weeds in the seed.
- Seed application rates shall be based on pure live seed per pound, which is passed upon purity and germination testing.
- Seed shall be tested within 120 days of application for purity, germination, and noxious weed content. Inert matter should not exceed 10%. A tetrazolium test may be performed on forb species which are limited in availability in order to assess viability of the seed before it is used.

The certificate holder shall seed disturbed cropland areas with wheat or other crop seed. The certificate holder shall consult with the landowner and farm operator to determine species composition, seed and fertilizer application rates and application methods. Cropland areas are successfully revegetated when the replanted areas achieve crop production comparable to adjacent non-disturbed cultivated areas. The certificate holder shall consult with the landowner or farmer to determine whether these areas have been successfully revegetated and shall report to the Department on the success of revegetation in these areas.

**Table 2: Proposed Seed Mixes for Summit Ridge Wind Farm**

Habitat Types	Species	Lbs/Acre (Pure Live Seed)
Native and Revegetated Grassland	Sherman big bluegrass ( <i>Poa Secunda</i> )	2
	Magnar basin wildrye ( <i>Leymus cinereus</i> )	2
	Whitman bearless wheatgrass ( <i>Psuedoroegneria spicata</i> ssp. <i>Inermis</i> )	2
	Sandberg's bluegrass ( <i>Poa sandbergii</i> )	2.5
	Idaho fescue ( <i>Festuca idahoensis</i> )	2.5
	Basin big sagebrush ( <i>Artemisia tridentata</i> ssp. <i>Tridentata</i> )	1
	<b>TOTAL</b>	<b>12</b>
Sagebrush and Rabbitbrush dominated Shrub-Steppe	Bluebunch Wheatgrass ( <i>Pseudoroegneria spicata</i> )	11
	Idaho fescue ( <i>Festuca idahoensis</i> )	4
	Sandberg's bluegrass ( <i>Poa sandbergii</i> )	2
	Bottlebrush Squirreltail ( <i>Elymus elymoides</i> )	0.5
	Silky Lupine ( <i>Lupinus sericeus</i> )	0.5
	Common Yarrow ( <i>Achillea millefolium</i> )	0.5
	Threadleaf fleabane ( <i>Erigeron filifolius</i> )	0.1
	Basin big sagebrush ( <i>Artemisia tridentata</i> ssp. <i>Tridentata</i> )	0.1
	Gray rabbit-brush ( <i>Chrysothamnus naseosus</i> )	0.1
	<b>TOTAL</b>	<b>18.8</b>
Agricultural Fields	Revegetated in accordance with landowner requirements	

### 5.3.3 Seed Planting Methods

A combination of broadcast seeding, drill seeding, and hydroseeding shall be used to apply the seed; the choice of method will depend on slope and other site conditions. For example, drill seeding and broadcast seeding should be used as appropriate on areas with a slope of less than 3:1, and hydroseeding should be used on areas with a slope of greater than 3:1. Seeding rates (pounds of pure live seed per acre) must be adjusted according to the seeding method used. For hydroseeding, green-dyed, wood-fiber mulch shall be added to the slurry mixture at a rate of 1000 pounds per acre. In addition to serving as a carrying agent for the seed, the biodegradable green mulch serves as a tracer for visually checking distribution to ensure complete and uniform coverage of the disturbed areas. Seeding activities should be scheduled during the period from September to April of any given year.

## 3.4 Revegetation Monitoring and Records

Successful revegetation will re-establish the native plant community through slow, but progressively steady, vegetative growth. Any problems with seeding should be identified and promptly corrected. In

order to properly assess the progress of vegetation establishment, the certificate holder shall maintain a record of revegetation work for both cropland and wildlife habitat areas.

Following completion of construction, the certificate holder will submit its vegetation monitoring methodology to ODFW and the Department for approval prior to monitoring. Within each revegetation area monitoring site, the investigator shall evaluate the progress of wildlife habitat recovery in comparison to the reference sites. The investigator shall evaluate the following site conditions (within the general revegetation area, revegetation monitoring sites, and within the reference sites):

- Degree of erosion due to disturbance activities (high, moderate or low).
- Vegetation density.
- Relative proportion of desirable vegetation as determined by the average number of stems of desirable vegetation per square foot or by a visual scan of the area, noting overall recovery status.
- Species diversity of desirable vegetation.

Following the initial year of seeding, monitoring will occur annually for the first five years. After the first growing season following initial seeding (Year 1), a qualified investigator shall inspect all areas of revegetation, including each paired monitoring and reference site, to assess revegetation success based on the success criteria and to recommend remedial actions, if needed.

During the initial 5-years of annual monitoring, the certificate holder's qualified investigator (ecologist or botanist) shall evaluate whether a revegetated wildlife habitat area is trending toward meeting the success criteria by comparing the approved, fixed-point revegetation area monitoring site to an approved, fixed-point reference site. The certificate holder's qualified investigator shall compare the revegetation area monitoring sites 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 monitoring site. If such events have eliminated all suitable reference sites for a revegetation area monitoring site, 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 a 6-month revegetation record report or annual compliance report, whichever report is submitted first.

The certificate holder shall submit, electronically, to the Department and ODFW the revegetation inspection report in a semi-annual report. The report shall include the investigator's assessment of whether the revegetated area monitoring sites are trending toward meeting the success criteria; whether the monitoring sites adequately represent revegetation success of equivalent habitat/habitat subtype of non-monitoring site revegetated areas; assessment of factors impacting the ability of the revegetated area monitoring sites to trend towards meeting the success criteria; description of appropriate weed control measures as recommended by the Department in consultation with ODFW and Sherman County Weed Control Authority; and, any remedial actions recommended.

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, in consultation with ODFW, 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 remedial action plan, subject to the approval of the Department in consultation with ODFW.

The certificate holder shall maintain a record of revegetation activities. In the record, the certificate holder shall include the date that construction activity was completed in the area to be restored, a description of the affected area (location, acres affected and pre-disturbances condition) and supporting figures representing the revegetated area, the date that revegetation work began and a description of the work done within the affected area. The certificate holder shall update the revegetation records as revegetation work occurs. The certificate holder shall report revegetation activities to the Department every-six months for the first 5-years after the completion of facility construction. After five years, any revegetation actions will be described in the annual report per OAR 345-026-0080(e).

### 3.5 Revegetation Success Criteria

In each monitoring report to the Department, the certificate holder shall provide an assessment of revegetation success for all previously-disturbed wildlife habitat areas. While the monitoring report shall evaluate whether all previously-disturbed wildlife habitat areas are trending towards revegetation success, the success criteria are evaluated based on the revegetation success of the approved revegetated monitoring sites compared to the approved, reference sites. A wildlife habitat area is successfully revegetated when the habitat quality is equal to, or better than, the habitat quality of the pre-construction ODFW habitat category of the reference sites 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, in consultation with ODFW, finds that the conditions of the wildlife habitat area revegetation monitoring sites satisfy the criteria for revegetation success, the Department shall conclude that the certificate holder has met the restoration obligations for that area. If the Department finds that the landowner has converted a temporarily disturbed wildlife habitat area to a use that is inconsistent with these success criteria (i.e. agricultural use), prior to the area achieving success criteria, the Department shall conclude that the certificate holder has no further obligation to restore the area for wildlife habitat uses and that the area shall be considered permanently disturbed. However, the certificate holder shall be responsible for meeting the obligations of the Council's Fish and Wildlife Habitat standard, including providing compensatory mitigation for these areas. Mitigation shall be determined by the Department, in consultation with ODFW.



## 4. Weed Control Methods

Weed control will be a priority for the life of the facility and should begin early to prevent infestations and development of substantial weed seed reservoirs in the soil. Emphasis will be placed on avoiding infestations and controlling populations of state-listed noxious weeds known to occur on the site. These species are listed in Table 3.

In addition to these state-listed weed species, the Wasco County Weed Department maintains its own weed list including special pest species. Weed species on the County list that are documented to occur on the site are also included in Table 3.

### 4.1 Preconstruction Noxious Weed Inventory

Before initial weed treatment begins, the certificate holder will evaluate target species and their identification, and to identify native species to be avoided.

### 4.2 Best Management Practices

Control will be accomplished through use of herbicides targeted to the individual weed species, cleaning ~~vehicles~~ ground disturbing equipment prior to entering or exiting the construction site (to reduce the potential for transporting non-native species to the construction areas), hand eradication, mowing, and use of fabric mulch or biobarriers.

Control of cheatgrass during the fall establishment period is essential in order to reduce competition with seeded plants. As a general strategy, the herbicide Plateau® may be applied during the fall prior to fall rains, as a pre-emergent cheatgrass treatment; however, this should only be done where seed application will be by rangeland drill such that the desirable grass seed will have minimal contact with the herbicide.

**Table 3: Designated Oregon Noxious Weeds Observed During Field Surveys**

Scientific Name	Common Name	ODA Status	Wasco County Weed Classification
<i>Apocynum sp.</i>	Dogbane		C
<i>Centourea diffits o</i>	Diffuse knapweed	B list	B
<i>Cirsium orvense</i>	Canada thistle	B list	B
<i>Cirsium vulgare</i>	Bull thistle	B list	
<i>Convolvulus orvensis</i>	Field bindweed	B list	C
<i>Conzya conodensis</i>	Horseweed		Q
<i>Lepidium latifolium</i>	Perennial pepperweed	B list	C
<i>Solsolo koli</i>	Russian thistle		C
<i>Verboscum thomis</i>	Common mullein		Q
Note: The Oregon State Weed Boar's Noxious Weed Classification System designates noxious weeds as either "A" and may be given the additional designation of "T"			

**Table 3: Designated Oregon Noxious Weeds Observed During Field Surveys**

Scientific Name	Common Name	ODA Status	Wasco County Weed Classification
<ul style="list-style-type: none"> <li>• "A" Designated 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.</li> <li>• "B" Designated Weed- a weed of economic importance which is regionally abundant, but which may have a limited distribution in some counties.</li> <li>• "T" Designated Weed- a priority noxious weed designated by the Oregon State Weed Board as a target weed which the ODA will develop and implement a statewide management plan. "T" designated noxious weeds are species selected from either the "A" or "B" list.</li> </ul> <p>The Wasco County Weed List and Classifications are as follows:</p> <ul style="list-style-type: none"> <li>• "A" Pests- a weed of known economic importance which occurs in the county in small enough infestations to make eradication practical.</li> <li>• "B" Pests- a weed of known economic importance and of limited distribution within the county and is subject to intensive control or eradication, where feasible, at the county level.</li> <li>• "C" Pests- a weed that also has economic importance but is more widely spread. Control of these weeds will be limited by conditions that warrant special attention.</li> <li>• "Q" Pests- a weed that exists in the county, but is of little, no, or undetermined economic importance. However, they are to be monitored and subject to control if they begin to appear threatening.</li> </ul>			

Glyphosate can then be applied over the winter, as needed in areas where cheatgrass has germinated, at a rate of four ounces per acre to seeded areas in February or March, before seeded grasses have germinated but after cheatgrass has germinated. A higher concentration may be required and will be determined based on incidental take after initial application. Frequent monitoring of such areas during this time period is encouraged, in order to determine whether sites are suitable for herbicide application. A less dilute rate of glyphosate should be applied to areas that have been disturbed and not seeded, if and when needed.

Other approaches may be used to control non-native plants, depending on site conditions, plant species, and project schedule and budget. These approaches include cleaning vehicles prior to entering the construction site (to reduce the potential for transporting non-native species to the construction areas), hand eradication, mowing, and use of fabric mulch or biobarriers. These approaches shall be considered on a site-specific basis, and applied by professionals trained to identify exotics for selective plant management. All chemical applications shall be made by licensed, trained and certified professionals, in accordance with strict health and safety procedures and with practices that comply fully with state and federal regulations. Use of Plateau® as a pre-emergent should be done with caution, as it may have an adverse effect on desired grasses where the seed was broadcast or hydraulically applied (i.e., no separation between seed and soil treated with Plateau®). It may be appropriate to experiment in some locations with Plateau® applied at a rate (or rates) substantially less than the six ounce rate recommended by the manufacturer for cheatgrass control in established rangelands.

The Plan shall be finalized prior to construction through coordination with ODFW and the Wasco County Weed Department, and shall be implemented during construction and for the life of the facility.

### 4.3 Weed Monitoring and Records

Monitoring will be conducted on an annual basis for the life of the facility 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 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 site, as well as other species on the Wasco County weed list that might require different control measures.

The certificate holder shall report the status of controlling and preventing the spread of and introduction of noxious weed species in its annual report, in accordance with OAR 345-026-0080.

## 5. Plan Amendments

This Plan 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.

**Attachment F: Draft Wildlife Monitoring and Mitigation Plan**

(As approved in the original Final Order dated August 19, 2011)

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## Summit Ridge Wind Farm: Wildlife Monitoring and Mitigation Plan

[FINAL ORDER, EXHIBIT 2, AUGUST 19, 2011]

This plan describes wildlife monitoring that the certificate holder shall conduct during operation of the Summit Ridge Wind Farm (Summit Ridge).<sup>1</sup> The monitoring objectives 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.

Summit Ridge is located in Wasco County, Oregon and is located in the Columbia Plateau Ecoregion (CPE). The facility is expected to consist of up to 87 turbine towers with 1.8- to 2.3-megawatt (MW) turbines, for a maximum generating capacity of up to 200.1 MW. Associated components and related or supporting facilities include turbine pads, maintenance roads, overhead and underground 34.5-kilovolt collector cables, an Operations and Maintenance building, a temporary concrete batch plant, and approximately eight miles of 230-kilovolt overhead transmission line.

The certificate holder shall use experienced and properly trained personnel ("investigators") to conduct the monitoring required under this plan. The professional qualifications of the investigators are subject to approval by the Oregon Department of Energy (ODOE, or Department). For all components of this plan except the 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* (WMMP) for Summit Ridge has the following components:

**1) Fatality monitoring program, including:**

- a) Carcass removal trials
- b) Searcher efficiency trials
- c) Fatality search protocol
- d) Statistical analysis
- e) Mitigation

**Department proposed addition to WMMP:** Prior to construction, the certificate holder shall prepare and submit a fatality monitoring protocol for review and approval by the Department, in consultation with ODFW.

**2) Grassland bird displacement study**

**3) Raptor nest surveys**

- a) Short-term monitoring
- b) Long-term monitoring
- c) Analysis
- d) Mitigation

**4) Wildlife reporting and handling process**

**5) Data reporting requirements**

<sup>1</sup> This plan is incorporated by reference in the site certificate for Summit Ridge and must be understood in that context. It is not a "stand-alone" document. This plan does not contain all mitigation required of the certificate holder and is intended to function in coordination with any federally required mitigation, including an Avian and Bat Protection Plan, entered into by Summit Ridge and the USFWS pursuant to the BGEPA.

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**6) Process for amending the WMMP**

Based on the results of the monitoring programs, 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 the Department and shall carry out mitigation actions approved by the Department, subject to review by the Oregon Energy Facility Siting Council (Council).

**FATALITY MONITORING**

Seasons for fatality monitoring will be as follows:

Season	Dates
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

Fatality monitoring will be conducted over two consecutive years, with half of the turbines being searched each year. At the end of the two years, all turbines will have been searched for a full year. The certificate holder, in consultation with the Oregon Department of Fish and Wildlife (ODFW), shall select search plots based on a systematic sampling design that ensures that the selected search plots are representative of the habitat conditions in different parts of the site. It is anticipated that each search plot will contain one or two turbines – this will be confirmed when the final layout is available. Search plots will be square and will be centered on the turbine location(s) and will have a length equal to the maximum blade tip height of the turbine contained within the plot (maximum blade tip height is the turbine hub-height plus one-half the rotor diameter). Maps of the search plots will be provided to ODOE before beginning fatality monitoring at the Project. The same search plots will be used in subsequent monitoring years.

In each monitoring year, fatality monitoring searches will be conducted at the rates of frequency shown below. Over the course of one monitoring year, 16 searches would be conducted, as follows:

Season	Frequency
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)

Fatality monitoring will begin one month after commencement of commercial operation of the facility. If the fatality rates during the first two years of monitoring at Summit Ridge 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 subsequent year of monitoring in Year 5 of operations.

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If fatality rates during the first two years of monitoring at Summit Ridge exceed any of the thresholds of concern or exceed the range of fatality rates found at other wind power facilities in the region, the certificate holder shall propose additional mitigation for Department and ODFW review within 6 months after reporting the fatality rates to the Department. Alternatively, the certificate holder may opt to conduct a third year of fatality monitoring immediately following the initial two years of monitoring if the certificate holder believes that the results of initial 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.

During each year of fatality monitoring, both carcass removal trials and searcher efficiency trials will be conducted, as discussed below.

**CARCASS REMOVAL TRIALS**

The objective of the carcass removal trials is to estimate the length of time avian and bat carcasses remain in the search area. "Carcass removal" refers to the disappearance—due to predation, scavenging, farming activity, or other means—of a carcass from the search area. Obtaining this estimate will allow the adjustment of fatality estimates to account for removal bias. Removal rates will be estimated by size class, habitat type, and season.

One carcass removal trial will be conducted during each season of fatality monitoring. Each trial will involve the placement and observation of at least ten small bird carcasses and ten large bird carcasses. The "small bird" size class will use carcasses of house sparrows, starlings, commercially available game bird chicks, or legally obtained native birds to simulate passerines. The "large bird" size class will use carcasses of raptors provided by agencies, commercially available adult game birds, or cryptically colored chickens to simulate raptors, game birds, and waterfowl. The investigators may use carcasses found during fatality monitoring searches. If fresh bat carcasses are available, they may also be used.

To avoid confusion with turbine-related fatalities, carcasses will not be placed in fatality monitoring search plots. Instead, they will be placed at non-searched turbines at sufficient distance from turbines that are searched so as not to attract scavengers to the search plots. The carcass removal trial plots will be distributed proportionately within habitat categories and subtypes similar to the search plots. The carcasses will be placed randomly within the carcass removal trial plots and in a variety of postures—hidden, partially hidden, and exposed. Trial carcasses will be marked discreetly for recognition by searchers and other personnel.

Carcasses will be checked for a period of 35 days to determine removal rates. They will be checked approximately every day for the first 4 days, and then on day 7, day 10, day 14, day 21, day 28 and day 35. This schedule may vary depending on actual carcass removal rates, weather conditions, and coordination with other survey work. At the end of the 35-day period, the trial carcasses and scattered feathers will be removed.

Scavenger (or other removal) activity that results in scattering of feathers or other carcass parts will not constitute removal if evidence of the carcass remains within an area comparable to the search plot size, and if the evidence would be discernible to a searcher during a normal survey. Before beginning removal trials for any subsequent year of fatality monitoring, the certificate holder shall report the results of the first year of removal trials to the Department 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 the Department.



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**SEARCHER EFFICIENCY TRIALS**

The purpose of searcher efficiency trials is to estimate the percentage of bird and bat fatalities that searchers are able to find. Searcher efficiency trials will be conducted on the fatality monitoring search plots in both grassland/shrub-steppe and cultivated agriculture habitat types. Searcher efficiency will be estimated by size class and by season. A pooled estimate of searcher efficiency will enable adjustment of fatality estimates to account for detection bias.

A searcher efficiency trial will be conducted during each of the seasons defined above during the years in which the fatality monitoring occurs. Each trial will involve approximately 25 carcasses (approximately 100 carcasses per year). The number of days needed to complete each trial (and thus the number of carcasses required each trial-day) will be varied among seasons so that searchers will not know the total number of trial carcasses being used on any given day. Personnel conducting fatality searches will not be made aware of the dates or plots on which searcher efficiency trials will be conducted.

Trial carcasses will be placed in the different habitat types roughly in proportion to the habitat composition within the site boundary. During each season, a randomized selection of both small bird and large bird carcasses will be used. 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 carcasses will be placed randomly within the fatality monitoring search plots and in a variety of postures—hidden, partially hidden, and exposed. The investigators shall mark the test carcasses to differentiate them from other carcasses that might be found within the search plots, 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.

Each efficiency trial will be spread over the entire season to incorporate effects of varying weather and vegetation growth. Trial carcasses will be placed before search personnel arrive; where appropriate (if, for example, avian scavengers are suspected in the area), carcasses will be placed before daylight.

The number and location of efficiency trial carcasses found during the carcass search will be recorded. The number of efficiency trial carcasses available for detection during each trial-day will be determined immediately after the day's searching 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 5 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 the Department 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 the Department.

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**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. Standardized carcass searches will be conducted over two years (16 searches each year), beginning one month after the start of commercial operation of the facility.

Fatality rates will be estimated using the statistical methods described below Section (d). Fatality estimates will be computed annually for eight categories: 1) all birds, 2) small birds, 3) large birds, 4) raptors, 5) grassland birds, 6) nocturnal migrants, 7) 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.

All carcasses located within areas surveyed, regardless of species, will be recorded and, if possible, a cause of death determined based on 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 carcass removal and searcher efficiency bias (Sections (a) and (b)).

Trained personnel will conduct the carcass searches by walking parallel transects within the search plots. Transects will be set at 6 meters apart in the area to be searched. A searcher will walk at a rate of approximately 45 to 60 meters per minute along each transect, searching both sides out to three meters for casualties. Search area and speed may be adjusted by habitat type after evaluation of the first searcher efficiency trial. The searchers will record the condition of each carcass found, using the following condition categories:

- Intact: a carcass that is completely intact, is not badly decomposed and shows no sign of being fed upon by a predator or scavenger
- Scavenged: an entire carcass that shows signs of being fed upon by a predator or scavenger, or portions of a carcass in one location (e.g., wings, skeletal remains, legs, pieces of skin, etc.)
- Feather Spot: 10 or more feathers or 2 or more primary feathers at one location (indicative of predation or scavenging)

All carcasses (avian and bat) found during the standardized carcass searches will be photographed, recorded, and labeled with a unique number. Each carcass will be bagged and frozen for future reference, possible necropsy, or use in removal or searcher efficiency 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 (global positioning system coordinates), 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 nearby wind turbines, power poles, fence, building, or overhead line structures. Collection of state endangered, threatened, sensitive, or other state protected species will be coordinated with ODFW. Collection of federally-listed endangered or threatened species and avian species protected under the Migratory Bird Treaty Act will be coordinated with the U.S. Fish and Wildlife Service (USFWS). Appropriate collection permits will be obtained from ODFW and USFWS.

Carcasses may be discovered incidental to formal carcass searches (such as while driving between search plots or while setting up carcass removal or searcher efficiency trials). All such carcasses will be recorded, analyzed, and collected just like those found during formal searches.

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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.

A protocol for handling injured birds will be developed and followed. Any injured native birds found on the facility site will be carefully captured by a trained biologist or technician and transported to an approved rehabilitation specialist (Blue Mountain Wildlife in Pendleton or other certified wildlife care center). 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.

#### STATISTICAL METHODS FOR FATALITY ESTIMATES

The estimate of the total number of wind facility-related fatalities will be based on:

- (1) The observed number of carcasses found during standardized searches 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) Carcass 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.

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 Project
$n$	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
$s_e$	the number of carcasses in removal trials that remain in the study area after 40 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

<sup>2</sup> If a different cause of death is not apparent, the fatality will be attributed to facility operation.

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1  $m_i$  the estimated annual average number of fatalities per turbine per year, adjusted  
2 for removal and observer detection bias

3 C nameplate energy output of turbine in megawatts (MW)

4 The estimated average number of carcasses ( $\bar{c}$ ) observed per turbine per year is:

5 
$$\bar{c} = \frac{\sum_{i=1}^n c_i}{k} . \quad (1)$$

6 Estimates of carcass removal are used to adjust carcass counts for removal bias. Mean carcass  
7 removal time ( $\bar{t}$ ) is the average length of time a carcass remains at the site before it is removed:

8 
$$\bar{t} = \frac{\sum_{i=1}^s t_i}{s - s_c} . \quad (2)$$

9 This estimator is the maximum likelihood estimator assuming the removal times follow an  
10 exponential distribution and there is right-censoring of data. Any removal trial carcasses still  
11 remaining at 35 days are collected, yielding censored observations at 35 days. If all trial carcasses  
12 are removed before the end of the trial, then  $s_c$  is 0, and  $\bar{t}$  is just the arithmetic average of the  
13 removal times. Removal rates will be estimated by carcass size (small and large), habitat type,  
14 and season.

15 Observer detection rates (i.e., searcher efficiency rates) are expressed as  $p$ , the proportion of  
16 trial carcasses that are detected by searchers. Observer detection rates will be estimated by  
17 carcass size, habitat type, and season.

18 The estimated per-turbine annual fatality rate ( $m_i$ ) is calculated by:

19 
$$m_i = \frac{\bar{c}}{\hat{\pi}} , \quad (3)$$

20 where  $\hat{\pi}$  includes adjustments for both carcass removal (from scavenging and other means)  
21 and observer detection bias assuming that the carcass removal times  $t_i$  follow an exponential  
22 distribution. Under these assumptions, this detection probability is estimated by:

23 
$$\hat{\pi} = \frac{\bar{t} \cdot p}{I} \cdot \left[ \frac{\exp\left(\frac{I}{\bar{t}}\right) - 1}{\exp\left(\frac{I}{\bar{t}}\right) - 1 + p} \right] . \quad (4)$$

24 The estimated per-MW annual fatality rate ( $m$ ) is calculated by:

25 
$$m = \frac{m_i}{C} . \quad (5)$$

26 Fatality estimates will be calculated for: (1) all birds, (2) small birds, (3) large birds, (4)  
27 raptors, (5) grassland birds, (6) nocturnal migrants 7) State Sensitive Species listed under OAR  
28 635-100-0040 and 8) bats. Differences in observed nocturnal migrant and bat fatality rates for lit

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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 final reported estimates of  $m$ , associated standard errors, and 90% confidence intervals will be calculated using bootstrapping<sup>3</sup>. 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,  $\bar{c}$ ,  $\bar{t}$ ,  $p$ ,  $\hat{\pi}$ , 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 5<sup>th</sup> and upper 95<sup>th</sup> percentiles of the 5000 bootstrap estimates are estimates of the lower limit and upper limit of 90% confidence intervals.

#### MITIGATION

Mitigation may be appropriate if fatality rates exceed a threshold of concern. For the purpose of determining whether a threshold has been exceeded, the average annual fatality rates will be calculated by species groups after monitoring is completed. Based on current knowledge of the species that are likely to use the habitat in the area of the facility, and based on thresholds established for other EFSC-level permitted wind projects<sup>4</sup>, the following thresholds apply to Summit Ridge:

Species Group	Threshold of Concern (fatalities per MW)
Raptors (All eagles, hawks, falcons and owls)	0.09
Raptor species of special concern (Swainson's hawk, ferruginous hawk, peregrine falcon, golden eagle, bald eagle, burrowing owl and any federal threatened or endangered raptor species.)	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

<sup>3</sup> Manly, B.F. 1997. Randomization, bootstrap, and Monte Carlo methods in biology. 2nd edition. Chapman and Hall, New York. 399 pp.

<sup>4</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."

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If the data show that a threshold of concern for a species group has been exceeded, additional mitigation may be implemented (if determined to be warranted by ODOE and ODFW). ODOE may also 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 mitigation is warranted, the certificate holder will proposed appropriate mitigation measures in consultation with the ODOE and ODFW to benefit the affected species.

Mitigation may include, but is not limited to, protection of nesting habitat for the affected group of native species (as through a conservation easement or similar agreement), 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/or conducting research or making a contribution to research that will aid in better understanding the affected species and its conservation needs in the region.

The certificate holder shall implement mitigation as approved by the Department and ODFW, subject to review by the Council. The Department 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.

#### **GRASSLAND BIRD DISPLACEMENT STUDY**

A grassland bird displacement study was begun as part of pre-construction biological surveys of the Summit Ridge Wind Power Project. Five 300 m-long and 100 m-wide transects were established perpendicular to proposed turbine strings, and five control transects were established at least 800 m away from proposed turbines or roads. Transects (both experimental and control) were placed in native habitat where grassland bird species were expected to occur. Transects were each surveyed three times during the spring 2009 breeding season. Grassland birds that were documented on-site during baseline surveys conducted in 2009 included grasshopper sparrow, savannah sparrow, vesper sparrow, Brewer's sparrow, western meadowlark, and horned lark. The long-billed curlew, a shorebird that utilizes grassland habitats during the summer months, was also detected during avian use surveys.

Two years of post-construction surveys will be conducted using the same transects and methods used in pre-construction surveys. The objective of this before-and-after design is to determine if there are noticeable changes in the presence and overall use by grassland bird species as a result of facility construction and operation. It is hoped that this study will provide information on whether operation of Summit Ridge discourages use of the area by the indicator species, grasshopper sparrow. Post-construction surveys will, however, include observations of common species such as western meadowlark, savannah sparrow, vesper sparrow, and Brewer's sparrow to provide information on the presence and distribution of these species within the study area and their behavior relative to turbine locations. Post-construction surveys will begin in the first spring after the facility is fully operational.

A comprehensive report of this research will be submitted to ODOE following the completion of the second year of post-construction surveys. The report will include maps showing transects walked and specific areas of use by the indicator species, plus analysis of any changes noted in distances from turbines by grassland bird species before and after Summit Ridge construction. The report will also include a description of vegetation compared to pre-construction conditions as recorded in the first year(s), including notes on any changes in land use, wildfire influences, and grazing, and describing any areas of intense vegetation impact.

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**1 RAPTOR NEST SURVEYS**

2 The objectives of raptor nest surveys are: (1) to estimate the size of the local breeding  
3 populations of raptor species that nest on the ground or aboveground in trees or other  
4 aboveground nest locations in the vicinity of the facility; and (2) to determine whether operation  
5 of the facility results in a reduction of nesting activity or nesting success in the local populations  
6 of the following raptor species: Swainson's hawk, golden eagle, bald eagle, ferruginous hawk,  
7 and burrowing owl.

8 The certificate holder shall conduct short-term and long-term monitoring. The investigators  
9 will use aerial and ground surveys to evaluate nest success by gathering data on active nests, on  
10 nests with young, and on young fledged. The investigators will analyze the data as described in  
11 Section 3(c) and will share the data with state and federal biologists.

**12 SHORT-TERM MONITORING**

13 Short-term monitoring will be done in two monitoring periods. The first monitoring period  
14 will be in the first two raptor nesting seasons after completion of construction of the facility. The  
15 second monitoring period will be in the fifth year after construction is completed. The certificate  
16 holder shall provide a summary of the first-period results in the monitoring report described in  
17 Section 5 of this WMMP. After the second monitoring period, the investigators will analyze the  
18 data compared to the baseline data.

19 During each monitoring period, the investigators will conduct a minimum of one aerial and  
20 one ground survey for raptor nests in late May or early June and additional surveys as described  
21 in this section. The survey area is the area within the facility site and a 2-mile buffer zone around  
22 the site. For the ground surveys while checking for nesting success (conducted within the facility  
23 site and up to a maximum of ½ mile from the facility site), nests outside the leased project  
24 boundary will be checked from an appropriate distance where feasible, depending on permission  
25 from the landowner for access.

26 All nests discovered during pre-construction surveys and any nests discovered during post-  
27 construction surveys, whether active or inactive, will be given identification numbers. Nest  
28 locations will be recorded on U.S. Geological Survey 7.5-minute quadrangle maps. Global  
29 positioning system coordinates will be recorded for each nest. Locations of inactive nests will be  
30 recorded because they could become occupied during future years.

31 Determining nest occupancy may require one or two visits to each nest. Aerial surveys for  
32 nest occupancy will be conducted within the facility site and a 2-mile buffer. For occupied nests,  
33 the certificate holder will determine nesting success by a minimum of one ground visit to  
34 determine the species, number of young and young fledged within the facility site and up to ½  
35 mile from the facility site. "Nesting success" means that the young have successfully fledged (the  
36 young are independent of the core nest site).

37 If burrowing owl nest sites are discovered, the investigators will monitor them according to  
38 the following protocol. This species is not easily detected during aerial raptor nest surveys. The  
39 investigators shall record active burrowing owl nest sites in the vicinity of the facility as they are  
40 discovered during other wildlife monitoring tasks. Any nests discovered during post-construction  
41 surveys, whether active or showing signs of intermittent use by the species, will be given  
42 identification numbers. Nest locations will be recorded on U.S. Geological Survey 7.5-minute  
43 quadrangle maps. Global positioning system coordinates will be recorded for each nest site.  
44 Coordinates for ancillary burrows used by one nesting pair or a group of nesting pairs will also be  
45 recorded. Locations of inactive nests will be recorded because they could become occupied  
46 during future years.



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The investigators shall conduct burrowing owl monitoring in the same years as the raptor nest surveys described above. For occupied nests, the investigators shall determine nesting success by a minimum of one ground visit to determine species, number of young and young fledged. Three visits to the nest sites may be necessary to determine outcome. Nests that cannot be monitored due to the landowner denying access will be checked from a distance where feasible.

If burrowing owl nests are discovered during the first year of post-construction raptor nest surveys (the first raptor nesting season after construction is completed), the investigators shall monitor those nest locations during the second year of surveys in the fourth year after construction is completed. Thereafter, the investigators shall monitor all known burrowing owl nest locations as a part of the long-term raptor nest monitoring program described in Section 2(b) below.

#### **LONG-TERM MONITORING**

In addition to the three 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>5</sup> Investigators will conduct the first long-term raptor nest survey in the raptor nesting season of the tenth 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 the Department. In developing an alternative protocol, the investigators will consult with ODFW and will take into consideration other monitoring conducted in adjacent areas. The investigators will analyze the data and report after each year of long-term raptor nest surveys.

#### **ANALYSIS**

The investigators will analyze the raptor nesting data to determine whether a reduction in either nesting success or nest use has occurred in the survey area. Impacts may have to be judged based on trends in the data, results from other wind energy facility monitoring studies, and literature on what is known regarding the populations in the region. If the analysis indicates a reduction in raptor nesting success or nest use, then the certificate holder will propose appropriate mitigation for the affected species as described in Section 2(d) and will implement mitigation as approved by the Department, subject to review by the Council.

Reductions in nesting success or nest use could be due to operation of Summit Ridge or some other cause. The investigators shall attribute the reduction to operation of the facility if the wind turbine closest to the affected nest site is a Summit Ridge turbine, unless the certificate holder demonstrates, and the Department agrees, that the reduction was due to a different cause. At a minimum, if the analysis shows that a Swainson's hawk, ferruginous hawk, bald eagle, golden eagle, or burrowing owl has abandoned a nest territory within the facility site or within ½ mile of the facility site, or has not fledged any young over two successive surveys within that same area, the investigators will assume the abandonment or unsuccessful fledging is due to operation of the facility unless another cause can be demonstrated convincingly.

#### **MITIGATION**

If the analysis shows a reduction in nesting success or nest use, the certificate holder shall implement mitigation if the Department determines that mitigation is appropriate. The certificate holder shall propose mitigation for the affected species in consultation with the Department and

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<sup>5</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.

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ODFW, and shall implement mitigation as approved by the Council. Mitigation should be designed to benefit the affected species or contribute to overall scientific knowledge and understanding of what causes nest abandonment or nest failure. Mitigation may be designed to proceed in phases over several years. It may include, but is not limited to, additional raptor nest monitoring, protection of natural nest sites from human disturbance or cattle activity (preferably within the general area of the facility), or participation in research projects designed to improve scientific understanding of the needs of the affected species. Mitigation may take into consideration whether the mitigation required or provided in conjunction with other components of the WMMP or *Habitat Mitigation Plan* would also benefit the raptor species whose nesting success was adversely affected.

**WILDLIFE REPORTING AND HANDLING PROCESS**

The certificate holder shall establish a training program for facility maintenance personnel to report avian and bat casualties while conducting routine duties associated with the operation of the facility. This program will include initial response, handling, and reporting of bird and bat carcasses discovered incidental to maintenance operations.

All avian and bat carcasses discovered by maintenance personnel will be photographed and the data recorded as would be done for carcasses within the formal search sample during scheduled searches. If incidental finds are made, maintenance personnel will notify a project biologist. The biologist will collect the carcass, or will instruct maintenance personnel to have an on-site carcass handling permittee collect the carcass. That permittee will 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 will be processed on the same day as 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.

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.

**DATA REPORTING REQUIREMENTS**

Wildlife monitoring data and analysis will be reported to ODOE. Monitoring data include fatality monitoring program data, grassland bird study data, raptor nest use and success data, and wildlife reporting and handling data. These reports may be included in the annual report required under OAR 345-026-0080 or submitted as a separate document at the same time the annual report is submitted.

USFWS and ODFW will be notified immediately if any federal or state endangered or threatened species are killed or injured on the Summit Ridge site.

**PROCESS FOR AMENDING THE WMMP**

This WMMP 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 the Department to agree to amendments to this plan and to mitigation actions that may be required under this plan. The Department 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 the Department.

## **Attachment G: Raptor Nest Protocol**



LotusWorks-Summit Ridge I, LLC  
Response to Request for Information #1  
Appendix B

Northwest Wildlife Consultants Memorandum regarding  
Endangered and Threatened Plant Species and Raptor  
Nest Surveys dated October 17, 2014



Northwest  
Wildlife  
Consultants, Inc.

## MEMORANDUM

Date: October 17, 2014

To: Steven Ostrowski, LotusWorks

From: Rick Gerhardt, Wildlife Biologist  
Northwest Wildlife Consultants, Inc.

Subject: Proposal to address ODFW and ODA concerns about Amendment to  
Summit Ridge Wind Farm Site Certificate

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In response to LotusWork's request for an amendment to the Summit Ridge Wind Farm Site Certificate, the Oregon Department of Energy (ODE) received comments from both the Oregon Department of Agriculture (ODA) and the Oregon Department of Fish and Wildlife (ODFW) in September 2014. The ODA commented that the rare plant surveys conducted for the original application are outdated, and the ODFW commented that the original raptor nest surveys are outdated (Desmarais, 2014). LotusWorks has contracted Northwest Wildlife Consultants, Inc. (NWC), which conducted the initial wildlife, plant, and habitat surveys, to prepare a proposal for conducting the requested additional rare plant and raptor nest surveys. This memorandum represents that proposal.

### Rare Plants

The original special status plant species surveys were conducted in June 2009, and methods and results are described in the ecological baseline studies and impact assessment and in the site certificate application for the Summit Ridge Wind Power Project (Gerhardt et al., 2010a; LotusWorks, 2010). Prior to field surveys, a literature review yielded a list of 19 plant species of concern with the potential for occurrence within leased lands associated with this project; of these, one was a state threatened species and four were state candidate species (Appendix C, Gerhardt et al., 2010a). Among the 111 species of vascular plant species recorded on the project (Appendix E, Gerhardt et al., 2010a), none of these listed or candidate species was found, and none of the 19 species of concern was found. Moreover, no suitable habitat was believed to occur on the project for three of the four candidate species, and there was low likelihood of occurrence for the remaining candidate species (dwarf evening-primrose) or the threatened species (Tygh Valley milk-vetch). Since those surveys were conducted in 2009, there has been no substantive change in land management practices, and livestock grazing continues to occur on most or all of the habitats. Thus, there is very low likelihood that these species of concern have colonized portions of the project since that time.

Nonetheless, LotusWorks is proposing an additional survey in all potentially suitable habitat within 200 feet of proposed turbine string center lines, access roads, and other facilities. Surveys will be conducted in late May or early June 2015. The target species will include the two mentioned above and the other three state candidate species (diffuse stickseed, hepatic monkeyflower, and Henderson's ryegrass). Searches will be conducted using an intuitively controlled survey method commonly used for rare plant surveys (USDA BLM, 1998; Elzinga et al., 1998). More detailed descriptions of the methods to be employed can be found in Gerhardt et al. (2010a). Following completion of this survey, a summary report will be submitted to ODA and ODE.

## Raptor Nests

The original raptor nest survey was conducted from a helicopter by an experienced NWC raptor biologist in early May 2009 (Gerhardt et al., 2010a), with an additional survey conducted along the proposed transmission line in May 2010 (Gerhardt et al., 2010b). Nests of several common raptor species were identified within 2 miles of the proposed facilities; these included turkey vulture, red-tailed hawk, prairie falcon, great horned owl, and long-eared owl (Gerhardt et al., 2010). There were no nests documented for any federal or state listed or candidate raptor species or for any state sensitive raptor species.

LotusWorks is proposing an additional raptor nest survey covering the proposed project area and a buffer of 0.5 mile of all proposed turbines, roads, and other facilities. The survey will be conducted in May 2015 (and prior to the start of construction), a time at which early nesting species (e.g., great horned owl) will still be on or near nests and late nesting species (e.g., Swainson's hawk) will have initiated incubation. (The project is outside the documented breeding range of the three state sensitive raptor species generally of concern in the Columbia Plateau Ecoregion, Swainson's hawk, ferruginous hawk, and burrowing owl.) This survey will be conducted primarily from the ground, but a helicopter will be used if there are areas that might contain raptor nests that cannot be efficiently examined from the ground. More detailed descriptions of the methods to be employed can be found in Gerhardt et al. (2014a).

Following completion of this survey, a summary report will be submitted to ODFW and ODE.

Should construction of this project not begin in 2015, then a second additional raptor nest survey will be conducted in the spring of the year of construction. The survey area and methods will be as described above, and a summary report will be submitted to ODFW and ODE.

## References

- Desmarais, E. 2014. Letter from E. Desmarais, ODE, to S. Ostrowski, LotusWorks, dated September 30, 2014 requesting additional information regarding the Summit Ridge Wind Farm Site Certificate Amendment.
- Elzinga, C. L., D. W. Salzer, and J. W. Willoughby. 1998. Measuring and monitoring plant populations. TR 1730-1. USDI Bureau of Land Management, Denver, Colorado. 477pp.
- Gerhardt, R., R. Gritski, and B. Anderson. 2010a. Ecological baseline studies and impact assessment for the Summit Ridge Wind Power Project, Wasco County, Oregon, consolidated report. Prepared for LotusWorks, Vancouver, Washington. Prepared by Northwest Wildlife Consultants, Inc., Pendleton, Oregon.
- Gerhardt, R., R. Gritski, B. Anderson. 2010b. Raptor nest survey of the proposed transmission line, Summit Ridge Wind Power Project, Wasco County, Oregon. Addendum to Consolidated Report. Prepared for LotusWorks, Vancouver, Washington. Prepared by Northwest Wildlife Consultants, Pendleton, Oregon.
- LotusWorks—Summit Ridge I, LLC. 2010. Site Certificate Application. Submitted to Oregon Energy Facility Siting Council on August 24, 2010.
- USDA Bureau of Land Management. 1998. Survey protocols for survey and manage strategy 2: Vascular Plants, V 2.0. Available online at: <http://www.blm.gov/or/plans/surveyandmanage/SP/VascularPlants>

## **Attachment H: State Sensitive Species**



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Sensitive Wildlife Species Observed		
Species	Federal Status	State Status
<b>Birds</b>		
Ferruginous hawk ( <i>Buteo regalis</i> )	Species of Concern (SoC) and Birds of Conservation Concern	Sensitive – Critical (SC)
Bald eagle ( <i>Haliaeetus leucocephalus</i> )	Birds of Conservation Concern, Bald and Golden Eagle Protection Act	State Threatened (ST)
Swainson's hawk ( <i>Buteo swainsoni</i> )	None	State Sensitive – Vulnerable (SV)
Loggerhead shrike ( <i>Lanius ludovicianus</i> )	BCC	SV
Long-billed curlew ( <i>Numenius americanus</i> )	BCC	SV
Grasshopper sparrow ( <i>Ammodramus savannarum</i> )	None	SV
Golden eagle ( <i>Aquila chrysaetos</i> )	Birds of Conservation Concern, Bald and Golden Eagle Protection Act	None
Yellow-breasted chat ( <i>Icteria virens</i> )	SoC	None
<b>Mammals</b>		
White-tailed jackrabbit ( <i>Lepus townsendii</i> )	None	SV
Pallid bat ( <i>Antrozous pallidus pacificus</i> )	SoC	SV
Hoary bat ( <i>Lasiurus cinereus</i> )	None	SV
Silver-haired bat ( <i>Lasionycteris noctivagan</i> )	SoC	SV
Small-footed myotis ( <i>Myotis ciliolabrum</i> )	SoC	None
Yuma myotis <sup>204</sup> ( <i>Myotis yumanensis</i> )	SoC	None

**IV.G.1.b. Fish and Wildlife Impacts**

To identify the habitat impacts for the likely facility configuration, the applicant estimated the habitat impacts of the “current layout,” as shown in the table below (“Habitat Impacts”).<sup>205</sup> The table also shows the total acreage of each habitat subtype within the 400-foot wildlife and habitat survey corridors surrounding all project facilities within the site boundary.<sup>206</sup> For the purpose of the habitat impact assessment, the applicant designed a “worst-case layout” which assumes the maximum possible affected area for the proposed facility footprint.<sup>207</sup>

<sup>204</sup> Either the Yuma myotis, or California myotis, or both, were detected. The calls of these two species are very difficult to distinguish. The California myotis does not have any special status.

<sup>205</sup> Based on Final ASC, Table P-3

<sup>206</sup> Final ASC, Section P.1, p. 1

<sup>207</sup> Final ASC, Section P.7.1, p. 22

will provide a revised estimate of permanent and temporary impacts based on the final Project design prior to construction in accordance with Site Certificate Condition 10.1.

Avian use surveys were conducted between 2005 and 2010. Raptor nest surveys were conducted in 2015–2016, and Summit Ridge agreed to seasonal construction restrictions and nest buffers specific to red-tailed hawk (*Buteo jamaicensis*) nests.

Summit Ridge is currently performing eagle use surveys to support potential federal permitting and guidance documents. These surveys will also inform updates to eagle occurrence in the analysis area. In preparation of this amendment request, Summit Ridge reviewed Oregon Department of Fish and Wildlife (ODFW's) Sensitive Species list and updated Attachment P-2 of Exhibit P of the ASC to reflect changes that have occurred to the list since the ASC and subsequent amendments were prepared (Table 2). This updated table includes only the ODFW Sensitive Species as required to meet the standard. As stated in the ASC, there is no riverine or other suitable habitat to support sensitive fish, amphibians, or turtles. Impacts to ODFW Sensitive Species were disclosed in the ASC and subsequent amendments and are still applicable to the updated list of ODFW Sensitive Species.

**Table 2. List of ODFW Sensitive Species in the Columbia Plateau Ecoregion of Oregon and Potential Occurrence in the Exhibit P Analysis Area**

Common Name	Scientific Name	2008 ODFW Status <sup>1</sup>	2016 ODFW Status <sup>2</sup>	Occurrence in the Analysis Area
<b>Reptiles</b>				
California mountain kingsnake	<i>Lampropeltis zonata</i>	Not Listed in Columbia Basin	S	Not documented during surveys. Habitat is pine forests, oak woodlands, and chaparral; this species is rare along the Columbia River (ODFW 2017). Typical habitat is absent from the analysis area.
Northern sagebrush lizard	<i>Sceloporus graciosus graciosus</i>	SV	S	Not documented during surveys. Habitat is sagebrush and xeric habitats (ODFW 2017), which are present in the analysis area.
<b>Birds</b>				
Bald eagle	<i>Haliaeetus leucocephalus</i>	Threatened	Not Listed	Documented during surveys. Nests near water, known to hunt carrion in uplands. Not an ODFW Sensitive Species; however, bald eagles have been monitored during surveys.
Brewer's sparrow	<i>Spizella breweri breweri</i>	Not Listed	S	Documented during surveys. This species prefers sagebrush habitat (ODFW 2017); habitat is present in the analysis area.
Burrowing owl (western)	<i>Athene cunicularia hypugaea</i>	SC	SC	Not documented during surveys. Nests in earthen burrows in open shrub-steppe and grassland habitat (ODFW 2017). Habitat is present in the analysis area.
Common nighthawk	<i>Chordeiles minor</i>	Not Listed in Columbia Plateau	S	Documented during surveys. Nests in open landscapes in sagebrush and rocky scablands and rimrock habitat (ODFW 2017). Habitat is present in the analysis area.

Common Name	Scientific Name	2008 ODFW Status <sup>1</sup>	2016 ODFW Status <sup>2</sup>	Occurrence in the Analysis Area
Willow Flycatcher (Eastern Oregon)	<i>Empidonax traillii (adastus)</i>	SV	Not Listed in Columbia Plateau	Not Considered.
Ferruginous hawk	<i>Buteo regalis</i>	SC	SC	Documented during surveys. Occurs in open landscapes east of the Cascade Mountains (ODFW 2017).
Golden eagle	<i>Aquila chrysaetos</i>	Not Listed	Not Listed	Documented during surveys. Not an ODFW Sensitive Species; however, golden eagles have been monitored during surveys.
Grasshopper sparrow	<i>Ammodramus savannarum perpallidus</i>	SV	S	Documented during surveys. Habitat is present in the analysis area in open grasslands. Commonly observed in the analysis area.
Lewis's woodpecker	<i>Melanerpes lewis</i>	SC	SC	Not documented during surveys. Breeds in low numbers in open habitat along eastern Oregon river and stream valleys (ODFW 2017). Typical habitat is absent from the analysis area, but probable migrant through analysis area.
Loggerhead shrike	<i>Lanius ludovicianus</i>	SV	S	Documented during surveys. Breeds in open habitat east of the Cascades (ODFW 2017).
Long-billed curlew	<i>Numenius americanus</i>	SV	SC	Documented during surveys. Commonly breeds in open grassland areas east of the Cascades (ODFW 2017). Habitat is present in the analysis area.
Sagebrush sparrow	<i>Artemisiospiza nevadensis</i>	SC (Absent from ASC)	SC	Not documented during surveys. Found throughout the arid expanses of the Great Basin and usually associated with big sage (ODFW 2017). Habitat is present in the analysis area.
Swainson's hawk	<i>Buteo swainsoni</i>	SV	S	Documented during surveys. Breeds in bunchgrass prairies east of the Cascades; prefers open country (ODFW 2017). Habitat is present in the analysis area.
Western greater sage-grouse	<i>Centrocercus urophasianus</i>	SV	Not Listed in Columbia Plateau	Not Considered.
<b>Mammals</b>				
Hoary bat	<i>Lasiurus cinereus</i>	SV	S	Documented during surveys. Likely migrant through the analysis area; one of the most common fatalities at wind energy facilities in the Pacific Northwest.
Long-legged myotis	<i>Myotis volans</i>	SV	Not Listed in Columbia Plateau	Not Considered.
Pallid bat	<i>Antrozous pallidus</i>	SV	S	Documented during surveys. Non-migratory species with typical foraging flight height below turbine.
Silver-haired bat	<i>Lasionycteris noctivagans</i>	SU	S	Documented during surveys. Probable migrant through analysis area and susceptible to turbine strike.

Common Name	Scientific Name	2008 ODFW Status <sup>1</sup>	2016 ODFW Status <sup>2</sup>	Occurrence in the Analysis Area
Spotted bat	<i>Euderma maculatum</i>	Not Listed	S	Not documented during surveys. Associated with arid desert terrain. Roosts include crevices in steep cliff faces. Known hunting grounds include open ponderosa pine forests, meadows, riparian areas, hay fields, and marshes adjacent to lakes.
Townsend's big-eared bat	<i>Corynorhinus townsendii</i>	SC	SC	Not documented during surveys. Non-migrant and uncommon.
<p>This table is updated from Attachment P-2 of the Application for Site Certificate (August 2010).</p> <p><b>1. 2008 ODFW Status:</b> SC = Sensitive Critical, SV = Sensitive Vulnerable</p> <p><b>2. 2017 ODFW Status:</b> SC = Sensitive Critical, S = Sensitive</p> <p>Sources:</p> <p>ODFW (Oregon Department of Fish and Wildlife). 2008. Oregon Department of Fish and Wildlife Sensitive Species List.</p> <p>ODFW. 2016. Oregon Department of Fish and Wildlife Sensitive Species List. Available online at: <a href="http://www.dfw.state.or.us/wildlife/diversity/species/docs/2017_Sensitive_Species_List.pdf">http://www.dfw.state.or.us/wildlife/diversity/species/docs/2017_Sensitive_Species_List.pdf</a>.</p> <p>ODFW. 2017. Wildlife Viewing website. Accessed December 22, 2017; available at: <a href="https://myodfw.com/wildlife-viewing">https://myodfw.com/wildlife-viewing</a>.</p>				

On the basis of this information, habitat impacts were estimated in the Final Order on the ASC and in subsequent amendments. The Habitat Mitigation Plan issued as Attachment G to the Final Order on Amendment #2 described permanent impacts to Category 2 habitat of 26.23 acres, and temporary impacts to Category 2 habitat of 35.52 acres. All other temporary and permanent impacts are to Category 6 habitat. Although the habitat categorization previously provided has not been formally updated at this time, biologists conducting other surveys in this area have determined that significant portions of the Project area have been affected by 2018 wildfires including the Substation Fire. As appropriate, any needed updates to the habitat delineation will be provided prior to construction. In addition to the habitat mitigation requirements, the Council adopted several conditions requiring additional pre-construction surveys, implementation of a Revegetation and Weed Control Plan approved by Wasco County and ODFW, and post-construction wildlife monitoring as described in the Wildlife Monitoring and Mitigation Plan.

This amendment request does not seek to enlarge the existing site boundary or physical components of the Project. There is no change to the previously approved maximum number of turbines, maximum generating capacity, or infrastructure locations of the Project. The total number of turbines at the Project will not exceed 72 and the generation capacity will not exceed 194.4 MW. Accordingly, the proposed amendment makes no changes that would alter the basis for Council's earlier findings, and therefore, Council may find that OAR 345-022-0060 is satisfied.

### 5.1.9 Threatened and Endangered Species (OAR 345-022-0070)

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

**Attachment I: ODFW Comments on Amended Proposed Order**

**From:** [Sarah J Reif](#)  
**Sent:** Friday, June 28, 2019 2:11 PM  
**To:** [WOODS Maxwell \\* ODOE](#); [THOMPSON Jeremy L](#)  
**Cc:** [REIF Sarah J](#)  
**Subject:** RE: Summit Ridge Amended Condition Review Request  
**Attachments:** Summit Ridge Wind Farm Condition 10.7 Amendment\_ODFW review 06.28.19.docx

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Hello Max,

ODFW is satisfied with your proposed edits to the Summit Ridge Wind Farm Conditions 10.7 and 10.5, with only some minor suggestions that you can find in the attached document as tracked changes and comment.

As we have stated consistently since this project's inception, it is worth stating again that ODFW finds this project to be sited appropriately from a wildlife habitat impact perspective. The majority of impacts will occur on agricultural lands that do not provide functional habitat for wildlife. The compliment of species detected on this project, the limited impacts to functional habitat, and the survey methodologies proposed by the applicant are consistent with other permitted wind projects on the Columbia Plateau. Where impacts to wildlife habitat and sensitive species are unavoidable, ODFW has found this project's proposed minimization and mitigation measures to be appropriate.

If you need any additional information from ODFW, please let either Jeremy Thompson or me know. Sincere apologies for the delay in our response.

Sarah Reif  
Energy Coordinator, Wildlife Division  
Oregon Dept of Fish & Wildlife  
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Salem, OR 97302  
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---

**From:** WOODS Maxwell \* ODOE <[Maxwell.Woods@oregon.gov](mailto:Maxwell.Woods@oregon.gov)>  
**Sent:** Friday, June 14, 2019 1:33 PM  
**To:** THOMPSON Jeremy L <[Jeremy.L.Thompson@state.or.us](mailto:Jeremy.L.Thompson@state.or.us)>  
**Cc:** REIF Sarah J <[Sarah.J.Reif@state.or.us](mailto:Sarah.J.Reif@state.or.us)>  
**Subject:** RE: Summit Ridge Amended Condition Review Request

Hi Jeremy,

Wanted to follow-up on this request regarding Summit Ridge. I understand that Sarah is out of the office for two weeks.

Thanks and let me know if you have any questions or want to have a chat about the request.  
Max



**Maxwell Woods**  
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Energy Facility Siting Division  
550 Capitol St. NE | Salem, OR  
97301  
P: 503-378-5050  
C: 503-551-8209  
P (In Oregon): 800-221-8035



Stay connected!

---

**From:** WOODS Maxwell \* ODOE  
**Sent:** Wednesday, May 22, 2019 4:16 PM  
**To:** REIF Sarah J <[Sarah.J.Reif@state.or.us](mailto:Sarah.J.Reif@state.or.us)>; THOMPSON Jeremy L  
<[Jeremy.L.Thompson@state.or.us](mailto:Jeremy.L.Thompson@state.or.us)>  
**Cc:** CORNETT Todd \* ODOE <[Todd.Cornett@oregon.gov](mailto:Todd.Cornett@oregon.gov)>  
**Subject:** Summit Ridge Amended Condition Review Request

Hi Sarah, Jeremy,

At last week's EFSC meeting, Council directed us to work with ODFW on revisions to conditions for the Summit Ridge Wind Farm, to require more specific details about pre-construction habitat surveys. I apologize in advance the edits in the Word document to condition 10.7 are difficult to follow because of track-changes.

I have prepared the attached Word document which explains the condition edits. Please see attached. I have also attached the specific direction Council gave us at the meeting, this is in the form of an email message.

Thank you both. Please let me know if you have questions, want to have a call about the edits, or if you have specific edits you would like to see, please feel free to email those directly to me. If you are satisfied with my suggested edits, please also confirm in writing via email.

Regards,  
Max

**Maxwell Woods**  
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Energy Facility Siting Division  
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## Summit Ridge Wind Farm

Based on direction by EFSC at the May 17, 2019 meeting, the Department has revised the Summit Ridge Wind Farm site certificate condition 10.7 from the proposed order, to address specific requests by EFSC that the condition require full field surveys of the micrositing corridor and habitat mitigation parcel, as pre-construction requirements. The direction from EFSC also required that ODFW approve the pre-construction survey methods protocol, and that ODFW review the pre-construction field survey results to verify that the final facility layout and design minimizes habitat impacts, based on the survey results. Further direction from EFSC required that the results of the pre-construction survey and verification be presented to EFSC by both Department and ODFW staff, and that the results be posted on the Department's website. Finally, EFSC directed the Department to revise the process for the reviewing and assessing the operational Wildlife Monitoring and Mitigation Plan with regards to avian fatality monitoring and outcome evaluation. The direction from EFSC is reflected in the amended condition 10.7 and condition 10.5 below. Highlighted language is new language, other language was included in the Department's proposed order.

**Recommended Amended Condition 10.7:** Before beginning construction, and after considering all micrositing factors, the certificate holder shall:

- a. Consider micrositing factors designed to minimize bird and bat collision risk including but not limited to locating wind turbines away from saddles in long ridges and locating wind turbines on the top of or slightly downwind of distinct ridges and set back from the prevailing upwind side. The certificate holder shall provide a map, to the Department and ODFW, showing the final design locations of all facility components and the areas of potential disturbance, and that identifies geographic and micrositing factors considered in final design.
- b. provide to the Department a map showing the final design locations of all components of the facility and the areas that would be disturbed during construction and identifying the survey areas for all plant and wildlife surveys. This information may be combined with the map submitted per the requirements of Condition 10.1. The certificate holder shall Hire a qualified professional biologist to conduct a pre-construction habitat survey (Condition 10.7) and Threatened and Endangered (T&E) plant survey (Condition 10.13). The surveys shall be conducted concurrently and in accordance with the survey protocol set forth in the Survey Protocol provided in Attachment G of the Final Order on Amendment 4 (for T&E plants and raptors), and in accordance with a survey protocol reviewed and approved by ODFW for all other habitat and species habitat categorization. The survey area will include plant and wildlife investigation within 400 feet of all areas within the micrositing corridor and extending 200 feet, in accordance with the T&E plant survey protocol (Condition 10.13), from potential habitat (e.g. non-Category 6 habitat) disturbance that would be disturbed during construction, which is located

**Commented [SJ1]:** Yes, ODFW still concurs with the proposed raptor surveys described in Attachment G.

**Commented [SJ2]:** I believe the only other pre-construction wildlife survey expected of the applicant is a field verification of the habitat categories. Suggested edit to clarify what's actually required.

within the site boundary, that lie outside of the previously surveyed areas. The pre-construction construction habitat and T&E plant survey shall be planned in consultation with the Department and ODFW, and shall include both desktop and field surveys survey protocols shall to be confirmed with the Department and ODFW prior to conducting the surveys. The desktop survey shall evaluate habitat within ½-mile from the site boundary (analysis area). Field surveys shall be conducted the entirety of the micrositing corridor in areas that are not active agriculture (Category 6 habitat).

- c. Following completion of the habitat and T&E plant field surveys, and final layout design and engineering, the certificate holder shall provide the Department and ODFW a report containing the results of the survey, showing expected final location of all facility components, the habitat categories of all areas that will be affected by facility components, and the locations of any sensitive resources. The report shall present in tabular format the acres of expected temporary and permanent impacts to each habitat category, type, and sub-type. The pre-construction habitat survey shall be used to complete final design, facility layout, and any additional micrositing adjustment 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. Based on the field survey report, the Department in consultation with ODFW shall verify that the final facility layout and design minimizes impacts to non-Category 6 habitat, state sensitive species, and threatened and endangered species. The report must be posted to the Department website. The results of the survey must be presented to EFSC at a future EFSC meeting by both the Department and ODFW staff. 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. [Final Order on Amendment 2; AMD4]

**Recommended Amended Condition 10.5** Prior to construction, the certificate holder shall finalize the Wildlife Monitoring and Mitigation Plan (WMMP), based on the draft WMMP included as Attachment F of the Final Order on Amendment 4#2, as approved by the Department in consultation with ODFW. The certificate holder shall conduct wildlife monitoring as described in the final WMMP, as amended from time to time. The final WMMP shall specify that the first long-term raptor nest survey will be conducted in the first raptor nesting season that is at least 5 years after the completion of construction and is in a year that is divisible by five (i.e., 2020, 2025, 2030); the certificate holder shall repeat the survey at 5-year intervals thereafter. The final WMMP must include a requirement that the certificate holder consult with the Department and ODFW after concluding the required two-year operational avian fatality monitoring. If the results of the two-year operational avian fatality monitoring exceed thresholds of concern established in the WMMP, the certificate holder must provide additional mitigation in a form and amount agreed upon by the Department, in consultation with

**Commented [SJR3]:** ODFW concurs with this new amended language.

One potential addition is that the field survey results could inform not only the layout and design of the facility, but also the timing of construction (e.g., disturbance buffers during the raptor nesting period). For brevity you could assume it's covered by the term 'design', but if you wanted to increase assurances you could add in something about construction timing.

ODFW. If the two-year operational avian fatality monitoring exceed thresholds of concern established in the WMMP, in addition~~al~~ to the mitigation that must be provided per this condition, the certificate holder must conduct an additional two-years of avian fatality monitoring, and report those results to the Department and ODFW for review and if necessary, further mitigation as agreed upon by the Department in consultation with ODFW. The results of the avian fatality monitoring must be posted to the Department website and presented to EFSC by Department and ODFW staff [Final Order on Amendment 2; AMD4]

**Commented [SJR4]:** ODFW supports this new language.

**From:** [Jeremy Thompson](#)  
**Sent:** Monday, July 1, 2019 8:49 AM  
**To:** [REIF Sarah J](#); [WOODS Maxwell \\* ODOE](#); [THOMPSON Jeremy L](#)  
**Subject:** RE: Summit Ridge Amended Condition Review Request

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All,

I also still contend that it would be inappropriate to revisit the pre-construction vegetation assessment at this time, as the entire project area was impacted by large fires last year, and it will take a few years for the habitat to recover back to a state similar to what would be expected long term.

---

**From:** Sarah J Reif [<mailto:Sarah.J.Reif@state.or.us>]  
**Sent:** Friday, June 28, 2019 2:11 PM  
**To:** WOODS Maxwell \* ODOE <[Maxwell.Woods@oregon.gov](mailto:Maxwell.Woods@oregon.gov)>; THOMPSON Jeremy L <[Jeremy.L.Thompson@state.or.us](mailto:Jeremy.L.Thompson@state.or.us)>  
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