Final Request for Amendment #4
Summit Ridge Wind Farm

Prepared for

Summit Ridge Wind, LLC

Prepared by

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Acronyms and Abbreviations

ASC	Application for Site Certificate
BLM	Bureau of Land Management
BPA	Bonneville Power Administration
CRGNSA	Columbia River Gorge National Scenic Area
dBA	A-weighted decibels
EFSC	Energy Facilities Siting Council
EFU	Exclusive Farm Use
ESCP	Erosion and Sediment Control Plan
FAA	Federal Aviation Administration
I-84	Interstate 84
kV	kilovolt
MW	megawatts
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
O&M	operations and maintenance
OAR	Oregon Administrative Record
ODA	Oregon Department of Agriculture
ODEQ	Oregon Department of Environmental Quality
ODFW	Oregon Department of Fish and Wildlife
ORBIC	Oregon Biodiversity Information Center
ORS	Oregon Revised Statutes
OWRD	Oregon Water Resources Department
Pattern	Pattern Development
Project	Summit Ridge Wind Project
RFA 4	Request for Amendment #4
Summit Ridge	Summit Ridge Wind, LLC
WCCP	Wasco County Comprehensive Plan
WCLUDO	Wasco County Land Use Development Ordinance

1.0 Introduction

Summit Ridge Wind, LLC ("Summit Ridge" or "Certificate Holder"), a wholly owned subsidiary of Pattern Renewables 2 LP ("Pattern Development" or "Pattern"), a subsidiary of Pattern Energy Group 2 LP ("Pattern Energy"), the sole limited partner of Pattern Development, is submitting this Request for Amendment #4 ("RFA 4") to change the construction start and completion deadlines of the Summit Ridge Wind Project ("Project"). The new construction start deadline would be changed from August 19, 2018 to August 19, 2020. The new construction completion deadline would be changed from August 19, 2021 to August 19, 2023.

The Project is an approved, but not yet constructed, wind energy generation facility that will be located in Wasco County, approximately 17 miles southeast of The Dalles, Oregon, and 8 miles east of Dufur, Oregon. It will have a peak generating capacity of up to 194.4 megawatts (MW). The Project will consist of up to 72 wind turbines, as well as related and supporting facilities, including a power collection system, a collector substation, a 230-kilovolt (kV) transmission line, a Supervisory Control and Data Acquisition system, an operations and maintenance (O&M) building, meteorological towers, access roads, temporary roadway modifications, and additional temporary construction areas. The Project site boundary consists of approximately 11,000 acres.

1.1 Purpose of Proposed Amendment Request

This amendment request is submitted pursuant to Oregon Administrative Record (OAR) 345-027-0085, to extend the deadlines for beginning or completing construction of the facility. Because the site certificate for the Project was issued prior to October 24, 2017, Sections (1) and (2) of OAR 345-027-0085 apply, and in accordance with Section (5)(d), the Council may specify new deadlines for beginning or completing construction that is not more than 2 years from the deadlines previously in effect. Therefore, this amendment request has been prepared pursuant to OAR 345-027-0050(3) and OAR 345-027-0060(1). Sections 2 through 6 of this amendment request address the applicable Energy Facilities Siting Council (EFSC, also referred to herein as "Council") standards for the amendments to the site certificate.

This amendment request includes the information required by 345-027-0057(4):

> *(4) Requests described in section (1), (2), and (3) must be submitted in writing to the Department and must include:*
>
> *(a) A narrative description of the proposed change.*

Response: See Sections 1.2 and 3.0 of this amendment request.

> *(b) Maps and/or geospatial data layers representing the effects and/or location of the proposed change.*

Response: There are no changes to geospatial data previously provided, and therefore, no new maps or geospatial data layers are submitted with this request.

(c) The certificate holder's evaluation of the determination(s) it is requesting under sections (1), (2), and (3).

Response: A request for a Type B review process was provided separately, along with an analysis of why this process is appropriate for this request.

(d) Any additional information the certificate holder believes will assist the Department's evaluation.

Response: A detailed analysis of how the Project continues to comply with relevant standards is provided in Sections 2 through 6 of this amendment request.

1.2 Summary of Modifications

As described above, this amendment request seeks Council approval of a 2-year extension of the construction start and construction completion deadlines. This request does not seek to modify the existing site boundary, physical components of the Project, maximum number or size of turbines, or maximum generating capacity of the Project.

The construction deadlines were modified by the previous Certificate Holder, LotusWorks-Summit Ridge I, LLC, in Amendment #1, which extended the construction start deadline by 2 years to August 19, 2016, and extended the construction completion deadline to August 19, 2019. Amendment #2 further extended the construction start and completion deadlines by 2 additional years, to August 19, 2018 and August 19, 2021, respectively. Both Amendments 1 and 2 also included modifications to the layout, turbine size, and project generating capacity.

The recent change in ownership was documented in the Third Amended Site Certificate which was issued on December 15, 2017. Certificate Holder requests Council approval of an extension of site certificate construction deadlines in order to allow the Project to complete development, including obtaining a power purchase agreement, financing, and construction under the requested timeline.

1.3 Regulatory Framework

This RFA 4 is organized pursuant to the requirements of OAR 345-027-0060. The Certificate Holder is seeking approval from the Siting Council to amend the Site Certificate to extend the construction and completion deadlines by 2 years. Sections 2 through 6 address the applicable Council standards for the amendments to the site certificate and are supported by the following:

- Attachment 1 provides a redline of the Third Amended Site Certificate as required by OAR 345-027-0060(1)(d).
- Attachment 2 provides an Updated Property Owner List and Tax Lot Map as required by OAR 345-027-0060(1)(f).

2.0 Certificate Holder Information (OAR 345-027-0060(1)(a))

(1) To request an amendment to the site certificate required by OARs 345-027-0050(3) and (4), the certificate holder shall submit a written preliminary request for amendment to the Department of Energy that includes the following:

(a) The name of the facility, the name and mailing address of the certificate holder, and the name, mailing address, email address and phone number of the individual responsible for submitting the request.

2.1 Name of Facility

Summit Ridge Wind Farm

2.2 Name and Mailing Address of the Certificate Holder

Summit Ridge Wind, LLC
c/o Pattern Renewables 2 LP
Pier 1, Bay 3
San Francisco, CA 94111
Attn: General Counsel

2.3 Name and Mailing Address of the Individuals Responsible for Submitting the Request

Kevin Wetzel
Manager Project Development
Pattern Energy Group 2 LP
Pier 1, Bay 3
San Francisco, CA 94111
Phone: 415-670-5227
Email: Kevin.Wetzel@patternenergy.com

3.0 Detailed Description of the Proposed Change (OAR 345-027-0060(1)(b))

(b) A detailed description of the proposed change, including:

(A) a description of how the proposed change affects the facility,

Response: This request does not change any of the Project facilities as described in the Third Amended Site Certificate. It only seeks to change the Project construction start deadline from August 19, 2018 to August 19, 2020; and to change the deadline for construction completion from August 19, 2021 to August 19, 2023.

3.1 Applicable Laws and Council Rules (OAR 345-027-0060(1)(b)(B))

(B) a description of how the proposed change affects those resources or interests protected by applicable laws and Council standards, and

Response: Section 5 below demonstrates how the proposed extension complies with applicable laws and Council standards.

3.2 Location of the Proposed Change OAR 345-027-0060(1)(b)(C))

(C) the specific location of the proposed change, and any updated maps and/or geospatial data layers relevant to the proposed change.

Response: The Project is a Council-approved wind energy facility located in Wasco County, Oregon, with up to 194.4 MW nominal generating capacity. This request does not change the location of any associated Project facilities, and therefore, no updates to maps and/or geospatial data layers are needed. This request only seeks to extend the construction start and completion deadlines for the Project. For reference, a map of the current approved Project location and site boundary is provided as Figure 1 (figures are provided at the end of this amendment request before the attachments).

4.0 Site Certificate Revisions (OAR 345-027-0060(1)(d))

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

Response: Summit Ridge proposes to change the language of Conditions 4.1 and 4.2 concerning the construction start and completion deadlines. The proposed changes to this condition are set forth in a redline of the Third Amended Site Certificate (included as Attachment 1) and below:

*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 or any successor rule in effect at the time the request for extension is submitted*

*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 345-16 027-0030 or any successor rule in effect at the time the request for extension is submitted.*

5.0 Council Standards and Laws Applicable to the Proposed Change (OAR 345-027-0060(1)(e))

OAR 345-027-0060(1)(e) A list of the Council standards and all other laws - including statutes, rules and ordinances applicable to the proposed change, and an analysis of whether the facility, with the proposed change, would comply with those applicable laws and Council standards. For the purpose of this rule, a law or Council standard is "applicable" if the Council would apply or consider the law or Council standard under OAR 345-027-0075(2).

The relevant Council standards to the proposed change include OAR 345 Division 22 (General Standards for Siting Facilities) and Division 24 (Specific Standards for Siting Facilities). The Project is an electric generating facility using wind turbine technology. Therefore, Division 23, which applies to non-generating facilities, does not apply. Similarly, inapplicable provisions of Division 24 (i.e., standards applicable to gas plants, gas storage, non-generating facilities, etc.) are not discussed. The sections below present a list of applicable Council standards and other laws along with an analysis of how the facility, with the proposed extension, continues to comply with the laws and standards.

5.1 Applicable Division 22 Standards

5.1.1 General Standard of Review (OAR 345-022-0000)

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

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

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

Response: The sections below demonstrate that Summit Ridge continues to comply with the requirements of the siting statutes and the standards adopted by the Council, and demonstrate how

Summit Ridge complies with relevant Oregon statutes and administrative rules including those identified in the Project Order.

5.1.2 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 certificate holder 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 other arrangement for access to the resource or service secured by that permit or approval.

Response: The Council previously found in the Third Amended Site Certificate, in December 2017, that Summit Ridge through its parent company organization (Pattern Development and Pattern Energy Group 2 LP) has the organizational expertise to construct and operate the Project[1]. This finding was based on a review of qualifications of Pattern personnel who would be responsible for construction and operation of the facility. Council amended Condition 6.1 to require that the Certificate Holder submit qualifications of the full-time, on-site construction manager, operations manager, and entity responsible for decommissioning, prior to relevant phases of the Project, to

[1] Final Order on Request for Transfer, Third Amended Site Certificate, p. 13 (December 15, 2017)

further demonstrate that the various phases of the Project will be managed by qualified personnel. There has been no change to Pattern's ownership, management, or holdings that would alter the previous conclusion, which was made less than 1 year ago. Pattern will comply with Condition 6.1.

Pattern Energy Group has developed and brought to commercial operation more than 4,500 MW of renewable energy worldwide. Pattern Development's affiliate, Pattern Energy Group Inc. owns and operates more than 2,700 MW of projects worldwide.

A review of Pattern's operating fleet history identified two blade failures. One failed blade was taken down safely, and replaced with no impact to the rest of the turbine. In the case of the second failure the blade failed, struck the tower, and became detached. As a result of the strike force, the tower also failed and the turbine collapsed. There were no injuries associated with the event.

Following the event, a root cause analysis and remediation plan was undertaken. The root cause was determined to be a crack in the sheer web of the blade. Pattern worked with the manufacturer to identify all turbine types that could be prone to such an event and retrofitted all other blades to remedy the issue. Internal and external O&M inspection programs were implemented to ensure against a repeat event. The entire turbine in which the failure occurred was decommissioned (down through the foundation) and rebuilt from scratch.

Pattern has significant experience with wind projects in cold weather environments, such as in Canada, and has invested considerable time evaluating risks and mitigations for icing events. Several methods have been implemented to minimize or eliminate ice throw. When ice builds up on wind turbine blades and the weight on the blades increases, the turbine controller can recognize this and stop the turbine operation until the ice has melted or dropped to the ground. The Pattern operations team also has a robust set of safety protocols applied to all projects in which icing may occur, which are intended to ensure the safety of the public, landowners, and wind facility staff and technicians.

Neither Pattern Development nor Summit Ridge Wind, LLC have received any material regulatory citations since the issuance of the *Final Order on Amendment 3*.

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

5.1.3 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; and

(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.

Response: The Council addressed the Structural Standard in Section V.A. of the Site Certificate to assess compliance with the Structural Standard.[2] Council reviewed information regarding seismic characteristics of the site and possible seismic and geological hazards and found that the risk of seismic and non-seismic hazards at the Project site was characterized as "low".

Consultation with the Oregon Department of Geology and Mineral Industries (DOGAMI) was conducted in 2009 and was renewed on November 14, 2018 (see Attachment 3). There have been no major modifications to the Project that would affect geotechnical recommendations since the original consultation occurred. Site-specific geotechnical exploration will be conducted 6 to 12 months prior to construction start, and the report will be provided to DOGAMI in accordance with Site Certificate Condition 5.8.

During consultation, DOGAMI requested additional information out outlined below. The requested information is presented as a response.

- 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: Pattern Energy General Design requirements are included in Attachment 3.

- 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;

[2] Final Order on the ASC, p. 133-136 (August 19, 2011)

Response: Pattern has performed an initial analysis of long-period ground motion hazards for the Project and has provided a comparison to the MV4 project in Palm Springs, California, which is near the San Andreas Fault (Attachment 4). Utility-scale wind turbines have been operating in southern California at some of the nation's hottest wind sites for more than 30 years and have long accounted for seismic movements in their design. The Summit Ridge site is considerably more benign than southern California as can be seen in a comparison of seismic code requirements in Attachment 4.

Pattern plans to design, engineer, and construct the facility to avoid dangers to human safety and the environment presented by those hazards in the following manner:

- A geotechnical engineer of record, licensed in Oregon, will provide the ground motion accelerations and durations as part of the site-specific geotechnical investigation/report. These would also be confirmed with IBC 2012 (as referenced in the current OAR chapter 918), as determined from ASCE 7-10 seismic parameters; or in accordance with the current version of the latest IBC, OSSC, and building codes adopted by the State of Oregon at the time of construction.
- The design engineer of record, licensed in Oregon, will take these parameters into account when designing the foundation as per applicable current OAR code requirements (as of now, IBC 2012 as per OAR chapter 918).
- Pattern will commission an analysis of the wind turbine tower suitability (either by the OEM and/or by a third party) and a report demonstrating compliance. In general, the experience has been that, with the exception of seismic design category E per ASCE chapter 7 (2010 or 2016 at least), the extreme wind event is the design driver of the tower (not seismic). The Summit Ridge site has a seismic design category B, which is very likely to fall within extreme wind event design basis. For seismic design category E sites as seen in southern California, in some cases a more robust tower was required, often pairing a higher wind class tower with a wind turbine that may be a lower wind class design (e.g., using a CL 1 tower with a CL 2 wind turbine).
- All of this will be independently reviewed and accepted by a competent third-party engineer (DNV GL in this case). Any information/reports provided will be available to DOGAMI/ODOE if desired.
- Pattern will utilize experienced geotechnical and design engineers with experience in wind turbine foundation design, including seismic considerations. The wind industry in general has a long history of experience in wind turbine and infrastructure design in accounting for seismic considerations, including compliance, utilization, interpretation, and contribution to international building codes around the U.S. and the world.

Although highly unlikely given the lack of recent activity, potential sources of long-period ground motions could include a significant event at or near recent faults associated with the

nearby Mount Hood Fault Zone (Madin, et al., 2017[3]) or the Cascadia subduction zone as identified in the Oregon Resilience Plan (OSSPAC, 2013[4]).

Given adequate seismic design as described above, potential impacts of long-period ground motions on very tall structures proposed with the facility are not expected. In more than 16 years in the industry, including experience with several southern California high wind and seismic areas (Palm Springs and Tehachapi), Pattern engineers are not aware of any modern turbines (post early 2000s) that have collapsed due to tower structural failure as a result of seismic activity in the United States. DNV GL, who performs work worldwide, has communicated to Pattern that no turbine towers have failed due to earthquakes since a few failed in a 1986 earthquake in Palm Springs (the tower design of which were completely different—utilizing a smaller lattice with cruder design analyses—than today's design). This includes more recent major earthquakes in Japan (Tohuku area that caused ground liquefaction) and southern Mexico Oaxaca region (where there are numerous modern-day turbines). Most tower collapses, which are quite rare in themselves (circa perhaps 0.05 percent out of approximately 50,000 modern turbines in the United States), are caused either by human or control failure leading to overspeed or, in more rare cases, by catastrophic failure of the foundation.

A description of how design of the facility would account for potential impacts from long-period ground motions will be provided in the final geotechnical report prior to construction.

- 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 is 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.

[3] Madin, I.P., Streig, A.R., Burns, W.J., Ma, L., 2017. The Mount Hood Fault Zone—Late Quaternary and Holocene Fault Features, Newly Mapped with High-resolution Lidar Imagery, In Scott, W.E., Gardner, C.A., 2017. Field-Trip Guide to Mount Hood, Oregon, Highlighting Eruptive History and Hazards, U.S. Geologic Survey, Scientific Investigation Report 2017-5022-G, p. 99-110 Available at: Https://pubs.usgs.gov/sir/2017/5022/g/sir20175022g.pdf

[4] OSSPAC (Oregon Seismic Safety Policy Advisory Commission). 2013. The Oregon Resilience Plan. February 2013. http://www.oregon.gov/gov/policy/orr/Documents/Oregon_Resilience_Plan_Final.pdf

- 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 additional 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.

The Council imposed six conditions to ensure that all potential seismic and non-seismic geologic hazards were addressed. Because there have been no changes to facility design or seismic or non-seismic risk at the Project site, no changes or additions to the conditions imposed in the Third Amended Site Certificate are required to ensure continued compliance with this standard.

The information requested for an Application for Site Certificate (ASC) to address the Structural Standard has been revised since the time the Site Certificate was issued (OAR 345-021-0010(h)). Although the standard itself has not been substantively modified, Summit Ridge provides information below to address two new areas of concern requested for Exhibit H of new applications: disaster resilience and climate change impacts.

> **Disaster Resilience.** The Project will be designed, engineered, and constructed to adequately avoid potential dangers to the project presented by seismic and non-seismic hazards. Substation and O&M building structures will be designed in accordance with the Oregon Structural Specialty Code. Substation equipment will be specified in accordance with the latest version of the Institute of Electrical and Electronics Engineers 693. If a disaster occurs, these measures will serve to help speed recovery of operations after disasters.
>
> **Climate Conditions.** The Portland State University Department of Environmental Science and Management, in partnership with the Portland State University Department of Geography, conducted a study to assess the likely consequences of climate change for the upper Umatilla River Basin, which is approximately 50 miles east of the Project. The study involved using the precipitation runoff modeling system for 10 global climate models to simulate the effects of climate and fire-burns on runoff behavior throughout the 21st century[5].

[5] MDPI. 2017. Watershed Response to Climate Change and Fire-Burns in the Upper Umatilla River Basin, USA. Available online at: www.mdpi.com/2225-1154/5/1/7/pdf

The climate models are used to simulate the effects of climate and fire-burns on runoff behavior, as well as future projections of greater annual average and summer temperatures throughout the 21st century. These changes are expected to increase stress to structures in the region due to more intense storms, heatwaves, and more frequent fires (MDPI 2017). The proposed design of the Project will be engineered to withstand storms under predicted future climate conditions to ensure resilience.

Reinforcing the Certificate Holder's electric grid with the Project also provides resilience to the overall energy grid in this part of Oregon, both directly, by upgrading a system that is anticipated to experience higher loads under rising temperatures and related increases in power demand for summer cooling, and indirectly, by supporting delivery of power generated through a variety of sources, to minimize the potential reduction in hydro power's role. Both of these reasons allow the Project to provide support for resiliency in the face of future climate change.

The extension of the construction deadlines does not affect the Council's finding that the construction and operation of the facility will be consistent with the Structural Standard. The proposed amendment makes no changes that would alter the basis for the Council's earlier findings.

This request does not seek to enlarge the existing site boundary or physical components of the Project. There is no change to the maximum number of turbines, maximum generating capacity, or infrastructure locations from what was previously authorized. The total number of turbines at the facility will not exceed 72 and the generation capacity will not exceed 194.4 MW. Therefore, no additional information is needed to determine that this request does not change the Project's compliance with OAR 345-022-0020(1) or require any modified site certificate conditions.

5.1.4 Soil Protection (OAR 345-022-0022)

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

Response: The Council previously found that the Project complies with the Soil Protection Standard and would not result in significant adverse impacts to soils.[6]

The Council addressed the Soil Protection Standard in Section IV.C of the Final Order on the ASC[7]. The Council reviewed the potential for wind and water erosion, soil compaction, and dust emissions during construction. However, during construction the Project will be subject to the requirements of the National Pollutant Discharge Elimination System (NPDES) Stormwater Discharge General Permit #1200-C and associated Erosion and Sediment Control Plan (ESCP). Council found that

[6] Final Order on Request for Contested Case, Amendment #2 and Request for Transfer of the Site Certificate, p. 39 (November 4, 2016)

[7] Final Order on the ASC, p. 19 (August 19, 2011)

operation of the facility would have little impact on soils. As previously described, the Certificate Holder will use best management practices to minimize the potential for erosion, and the Project Revegetation and Weed Control Plan (Attachment E to the Final Order on the Amendment #2) lays out plans to revegetate areas of temporary disturbance. The design, construction, and operation of the facility, when taking into account mitigation, would not result in a significant adverse impact to soils. In the original Site Certificate, the Council adopted eight conditions to control and mitigate potential adverse impact to soils and to mitigate the risk of soil contamination during construction and operation.[8] Subject to compliance with the relevant Site Certificate conditions, the Council found that the design, construction, and operation of the Project would minimize impacts on soils as required by the Soil Protection Standard.

Wildfires that occurred in 2018 within portions of the site boundary burned the vegetation (wheat) on the ground in the Project area; however, the land use has not changed, and the previous land use activities of primarily dryland winter wheat production and cattle pasture will be able to resume, though cattle grazing may not resume until vegetation has been re-established. Although the vegetation burned, the soil condition would not have changed because the burned vegetation will be plowed into the soil for spring planting to resume dryland farming, providing additional nutrients to the soil for crops. During construction, the Project will be subject to the same requirements of NPDES Permit #1200-C and associated ESCP; as such, erosion will be minimized. Topsoil management and best management practices will remain the same.

The proposed extension to construction start and completion deadlines makes no changes that would alter the basis for the Council's earlier findings. This request does not change the mitigation measures presented in the Final Order on the ASC, or Summit Ridge's ability to comply with soil protection conditions in the Third Amended Site Certificate, and therefore, this amendment request complies with OAR 345-022-0022.

5.1.5 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

[8] Summit Ridge Wind Farm Site Certificate Conditions 9.1-9.8

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).

Response: Council previously concluded in the Final Order on the ASC and in subsequent amendments that the Project complies with the Land Use Standard.[9] The Land Use Standard requires the Council to find that a proposed facility complies with the statewide planning goals adopted by the Land Conservation and Development Commission. Additionally, the Certificate Holder requested that the Council make a determination of compliance with local land use regulations under Oregon Revised Statutes (ORS) 469.504(1)(b)(B). The analysis area for land use consists of the area within the site boundary and within a half mile of the site boundary. The Certificate Holder is not aware of any significant changes to land use within the analysis area. As described in the Final Order on Amendment 2, "*Almost all of the area within the site boundary is non-irrigated land used for primarily dryland winter wheat production while the remaining areas within the site boundary serve as pasture for cattle. There is a small number of residences and other buildings associated with farming/ranching in the area.*" Although cattle grazing may have been temporarily suspended in certain areas due to the effects of fires in 2018, land use in the area is generally the same as previously described.

The applicable substantive criteria were determined to consist of the following chapters of the Wasco County Land Use Development Ordinance (WCLUDO) listed below. Although the most recent update to the WCLUDO was in July 2016 and the Final Order on Amendment #2 was issued in November 2016, the formatting changes adopted in July 2016 do not appear to have been addressed in the Final Order on Amendment #2. The Wasco County Planning Department confirmed that no substantive changes were made to the code since 2012 except for the adoption of Chapter 11, which is not applicable. The sections of the code that were modified from the version provided in the Final Order on Amendment #2 are noted below.

Chapter 1 – Introductory Provisions (no change from 2016 analysis)

Section 1.030 (Severability/Legal Parcel Determination)
Section 1.090 (Definitions of Parcel and Structure)

[9] Final Order on Request for Contested Case, Amendment #2 and Request for Transfer of the Site Certificate, p. 109 (November 4, 2016)

Chapter 3 – Basic Provisions (reorganized as identified below)

Section 3.210 (Exclusive Farm Use Zone) – no change
Section 3.210(B) (Uses Permitted without Review)

- Now called Section 3.212 (Uses Permitted without Review)
- "Transportation Facilities" subpart 7 is now listed under Section 3.212.G, but text has not changed

Section 3.210(D) (Uses Permitted Subject to Standards/Type II Review)

- Now called Section 3.214 (Uses Permitted Subject to Standards/Type II Review)
- "Utility/Energy Facilities" subpart 12 is now listed under Section 3.214.L, but text has not changed except for code section reference updates

Section 3.210(E) (Conditional Uses)

- Now called Section 3.215 (Uses Permitted Subject to Conditional Use Review/Type II or Type III)
- "Commercial Power Generating Facility (Utility facility for the Purpose of Generating Power" subpart 14 is now listed under Section 3.215.M, but text has not changed except for code section reference updates

Section 3.210(F) (Property Development Standards)

- Now called Section 3.216 (Property Development Standards)
- All sections cited in the Final Order on Amendment #2 have the same text as the current WCLUDO, but section numbering has been revised

Section 3.210(H) (Agricultural Protection)

- Now called Section 3.218 (Agricultural Protection)
- Text has not changed except for code section reference updates

Section 3.210(J) (Additional Standards)

- Now called Section 3.219 (Additional Standards)
- "Wind Power Generating Facility" was referenced as 3.210(J)(17) but is now referenced under Section 3.219.Q. Text has not changed except for code section reference updates

Chapter 4 – Supplemental Provisions

Section 4.070 (General Exceptions to Building Height)

- Text modifications clarify code references but are not substantive

Chapter 5 – Conditional Use Review

Section 5.020 (Authorization to Grant or Deny Conditional Uses, and Standards and Criteria Used)

- No updates

Chapter 10 – Fire Safety Standards

- No updates

Chapter 19 – Standards for Energy Facilities and Commercial Energy Facilities

Section 19.010 (Purposes)
Section 19.030 (Standards for Approval)

- No updates

The Wasco County Comprehensive Plan (WCCP) also was found to be applicable for evaluation of the Land Use standard. The WCCP was last updated in July 2016, which was prior to issuance of the Second Amended Site Certificate. Section XV, Goals and Policies, is applicable. Further, Council has previously found the Project, including the associated transmission lines, complied with ORS 215.275, which establishes the statutory criteria for determining whether a utility facility located on Exclusive Farm Use (EFU) land is "necessary for public service".[10] ORS 215.274, *Associated Transmission Lines Necessary for Public Service,* was enacted subsequent to the original analysis and applies to the Project because it connects the commercial energy generating source to its interconnection point with the Northwest Power Grid.

Wasco County Land Use Development Code Compliance

The detailed analysis conducted for Amendment #2 concluded that the Project complies with each of the identified applicable substantive criteria, except for the setback provisions of WCLUDO Section 3.210(F)(1), which is now numbered Section 3.216. The Council found that all of the land adjacent to the analysis area is currently being used for grazing and winter wheat production and that, therefore, the facility is subject to a 200-foot setback from the property line. Certain transmission lines and poles cannot be located at least 200 feet from the property line; all other facility components would be located a minimum of 200 feet from the property line of adjacent land used for perennial or annual crops. The Council found in the Final Order on the ASC and subsequently in the Final Order on Amendment #2 that the 200-foot setback is not required for the facility to be compliant with statewide planning goals. There has been no change to the transmission line and pole location or constraints, and there has been no change to the relevant statewide planning goals.

WCLUDO 19.030(D)(1)(c)(3)(c)(ii) requires that if any administrative adjustments are made to authorize a lesser setback for turbines from dwellings, that the proposed adjustment complies with the Oregon Department of Environmental Quality (ODEQ) noise standard (OAR 340-035-0035). As described in previous RFAs and as determined by the Council under Final Order on Amendment #2, p. 155, the Project will meet the ODEQ noise standard either through turbine siting, turbine technology to reduce noise, or through obtaining noise easements under OAR 340-035-0035.

A review of recent aerial photography (see Section 5.3.1 below) resulted in the identification of two potential residences located within the 36-A-weighted decibels (dBA) noise contour that were not previously identified or shown on Project maps. Both of the potential residences identified are owned by landowners with whom Summit Ridge already has executed noise waivers or lease agreements. Therefore, the Project would comply with the ODEQ Noise Standard and consequently

[10] Final Order, p. 34 (August 19, 2011)

with the requirements of WCLUDO 19.030(D)(1)(c)(3)(c)(ii) even with the addition of the two potential residences.

There have been no substantive changes to the WCLUDO regulations, as described above. Therefore, the Council may rely on its prior findings to determine that the Project complies with each of the applicable substantive criteria in WCLUDO.

Wasco County Comprehensive Plan Compliance

The current version of the WCCP was most recently updated in 2010. This version was evaluated in the Final Order on the ASC and in subsequent Site Certificate amendments. This request does not seek to enlarge the existing site boundary or change physical components of the Project. There is no change to the previously approved maximum number of turbines or maximum generating capacity of the Project from the requirements of the Third Amended Site Certificate. There is also no change to the previously approved maximum turbine height from what was originally authorized. The total number of turbines at the Project will not exceed 72, and the generation capacity will not exceed 194.4 MW. Therefore, the previous analysis stands and Council may rely on its prior findings that the Project complies with the WCCP.

ORS 215.274 Compliance

In the original ASC and subsequent amendments, Summit Ridge requested and received Council approval to construct a centrally-located collector substation and 230-kV transmission line. No changes have been made to the collector substation and 230-kV transmission line locations since the original site certificate was issued. WCLUDO does not contain specific code provisions implementing ORS 215.274; therefore, ORS 215.274 requires analysis outside of the WCLUDO. This section demonstrates that the transmission components of the Project meet the applicable statutory criteria under ORS 215.274, *Associated Transmission Lines Necessary for Public Service.*

> *(1) As used in this section, associated transmission line has the meaning given that term in ORS 469.300 (Definitions).*
>
> *ORS 469.300 (3). Associated transmission lines means 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.*

Response: The previously-approved 230-kV transmission line meets the definition of an associated transmission line in ORS 469.300 (3) because it will connect the energy generated from the Project to the Northwest Power Grid. The transmission line will be approximately 8 miles in length, running northwest from the collector substation for approximately 2 miles, then almost due west for another 6 miles to the Bonneville Power Administration (BPA) substation, connecting with BPA's 500-kV "Big Eddy to Maupin-Redmond" transmission line.

> *(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:

(a) At least one of the requirements listed in subsection (3) of this section; or

(b) The requirements described in subsection (4) of this section

Response: The entire route of the Project 230-kV transmission line does not meet any of the requirements of subsection (3). However, it does meet the requirements of subsection (4) as outlined in that section below.

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

(a) The associated transmission line is not located on high-value farmland, as defined in ORS 195.300 (Definitions for ORS 195.300 to 195.336), or on arable land;

Response: Small segments of the 230-kV transmission line route cross through high-value farmland, as shown in Figure 2; therefore, it does not meet this requirement.

(b) The associated transmission line is co-located with an existing transmission line;

Response: The 230-kV transmission line will not be co-located with an existing transmission line; therefore, it does not meet this requirement.

(c) The associated transmission line parallels an existing transmission line corridor with the minimum separation necessary for safety; or

Response: The 230-kV transmission line does not parallel an existing transmission line corridor; therefore, it does not meet this requirement.

(d) The associated transmission line is located within an 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.

Response: The 230-kV transmission line route consists of new transmission line corridor. The 230-kV transmission line route does not include sections of new transmission line infrastructure within an existing linear right-of-way. Therefore, the Project 230-kV transmission line route does not meet this requirement.

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

(A) Technical and engineering feasibility;

Response:

The Certificate Holder evaluated the technical and engineering feasibility of alternative transmission routes to minimize potential impacts to arable land and high-value farmland. The existing BPA transmission line is a fixed corridor end point for all alternative transmission line routes. Although the location of the proposed Project collector substation could be moved within the Site Boundary, no feasible alternative route exists that can connect the Project's facilities to the BPA transmission line without crossing arable land due to the extent of arable lands located in the area between the Project and the BPA transmission line, and due to the geographic limitations of gullies, ravines, and steep slopes in the areas where there are non-arable soils (Figure 2).

The Certificate Holder considered a transmission line corridor between the BPA transmission line and the Project collector substation that paralleled Adkisson and Jameson Road; however, the Certificate Holder determined that the existing road right-of-way would not provide sufficient space to accommodate curvatures in the transmission line route.

The proposed 230-kV transmission line route is feasible to develop within the 0.5-mile-wide transmission line corridor (as defined in OAR 345-001-0010(13) because it represents the straightest route the shortest length, and the least impacts as it avoids sensitive habitat and minimizes impacts to high-value farmland and arable land. Therefore, it meets the technical and engineering feasibility criterion.

> *(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;*

Response: As shown in Figure 2, the 230-kV transmission line route is locationally dependent because it must cross high-value farmland and/or arable land to achieve a reasonably direct route between the wind farm and a point of interconnection with the BPA system.

High-value Farmland

High-value farmland is defined under ORS 195.300(10) subparts (a) through (f). The high-value farmland located within or adjacent to the site boundary meets the definition provided under ORS 195.300(10)(a) but does not meet the definition provided under ORS 195.300(10)(b)-(f).[11] ORS 195.300(10)(a) relies, in part, on the definition of high-value farmland in ORS 215.710. ORS 215.710, subpart (1) is provided below:

ORS 215.710

[11] The definition of high-value farmland provided under ORS 195.300(10)(b)-(f) does not apply to the land within or adjacent to the site boundary for the following reasons: 1) The site boundary is located east of Highway 101; 2) There is no land within or adjacent to the site boundary that is within an irrigation district, diking district, or within the place of use of an Oregon Water Resources Department permit, certificate, or decree for irrigation; 3) There are no wine grapes planned in or adjacent to the site boundary; and 4) The site boundary is outside of all the viticultural areas listed under ORS 195.300(10)(e) and (f).

(1) For purposes of ORS 215.705 (Dwellings in farm or forest zone), high-value farmland is land in a tract composed predominantly of soils that, at the time the siting of a dwelling is approved for the tract, are:

(a) Irrigated and classified prime, unique, Class I or Class II; or

(b) Not irrigated and classified prime, unique, Class I or Class II.

Two soil series within the site boundary meet the high-value farmland classification: 12B and 26. Three other soils series, 44, 46B, and 17B, are considered high-value only if they are irrigated, but because no irrigation is occurring on these soils within the site boundary, they would not be classified as high-value farmland. Figure I-1 from the 2010 Summit Ridge I, LLC ASC (see Attachment 5) shows the Natural Resources Conservation Service (NRCS) soil types within the site boundary. Figure 3 shows the NRCS Soil Classifications associated with each soil type polygon within and nearby the site boundary. High-value soils account for 7 percent (approximately 478 acres) of the total land within the site boundary and only 5 percent (approximately 80 acres) of the portion of the site boundary associated with the transmission line route.

ORS 215.710 further defines high-value farmland in subparts (2) through (4). However, the soils within or near the site boundary do not meet the definitions of subpart (2) because no "specified perennials" (as defined under ORS 215.170(2)) are currently cultivated within the identified tracts comprising the site boundary. Of the cultivated land within or near the site boundary, the majority is used for dryland wheat production or pasture land. The soils within or near the site boundary do not meet the definitions under ORS 215.710 subpart (3) or (4) because the site boundary is not within the Willamette Valley or west of the coast range.

Per the evaluation provided above, land designated as high-value farmland within and adjacent to the site boundary is determined by the location of NRCS Class I and II soils (per ORS 195.300(10)(a)). Given that the high-value farmland designation is based on soil types, its location is scattered throughout the site boundary and its vicinity, and these soil types occur in patchy, highly irregular shapes (Figure 2), making them difficult to avoid in a coherent way when siting a linear transmission line between the wind farm and the point of interconnection.

Arable Lands

Under WCLUDO Section 3.219.Q.2 and under OAR 660-033-0130(37)(b) (Oregon's administrative rules governing the siting of wind energy facilities on agricultural lands), arable lands are defined as "lands that are cultivated or suitable for cultivation including high-value farmland soils described at ORS 195.300(10)."

Approximately 2,039 acres of land are being cultivated as dryland wheat within the site boundary and would therefore meet the definition of arable land (Figure 4). Spatial data of all currently cultivated land in the vicinity of the site boundary was not available. However, based on review of current and historic aerial photography, dryland wheat farming is occurring to the north and south of the current transmission line route. There is no feasible route between the wind farm substation

and the BPA point of interconnect that would avoid crossing land that has been or is currently cultivated with dryland wheat (Figure 4).

WCLUDO Section 3.219.Q.2 and OAR 660-033-0130(37)(b) do not specify what amounts to "lands suitable for cultivation." Therefore, the Certificate Holder turns to the definition of "arable land" in OAR 660-033-0130(38) (Oregon's administrative rules governing the siting of solar photovoltaic power generation facilities on agricultural lands), which defines arable land as "predominantly cultivated, or if not cultivated, predominantly comprised of arable soils." NRCS soil capability Classes I through IV are generally considered arable soils (Helms 1992[12]) whereas NRCS soil Classes V through VIII are generally considered nonarable soils. Arable soils account for 68 percent (approximately 4,454 acres) of the total land within the site boundary and 54 percent (approximately 896 acres) of the portion of the site boundary associated with the transmission line route. Arable soils (Classes I through IV) are dominant in the area west of the wind farm and east of the existing BPA line (Figure 2), and there is no feasible direct route between the wind farm and the BPA point of interconnect that would avoid crossing arable soils (Figures 2 and 3).

There are no urban or non-resource lands available to locate the transmission line where it could serve its purpose of conveying energy from the wind farm (on EFU land) to the electrical grid system. Figure 5 shows the current Wasco County zoning within and surrounding the site boundary, including the 230-kV transmission line route. As shown in Figure 5, all land within and adjacent to the site boundary is zoned EFU by Wasco County. In addition, the transmission line route was sited so that it could have a reasonably direct route to the BPA grid system interconnection point, thereby minimizing impacts. Only small portions of the transmission line route crosses through high-value farmland and, where practicable, support structures will also be placed to avoid high-value farmland to further minimize impacts.

> *(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;*

Response: No existing right-of-way is available between the wind farm and the substation location. The area near the Project substation lacks well-defined linear infrastructure such as roads that would provide a reasonably direct route for the transmission line to connect with the electrical grid system without substantially lengthening the route. Figure 6 shows all existing road, railroad, and transmission rights-of-way within 2 to 4 miles of the site boundary. The existing road rights-of-way located between the existing BPA 230-kV line and the wind farm site do not provide reasonable direct routes because of spacing constraints. Any alternative route that would utilize an existing road right-of-way would significantly increase the length of the line, require acquisition of numerous new land rights, increase construction costs, and potentially interfere with existing utility infrastructure already located within the right-of-way.

[12] Helms, D. 1992. Readings in the History of the Soil Conservation Service. National Resource Conservation Service. Washington, DC, pp. 60-73.

The existing BPA 230-kV line is the required point of interconnect due to interconnection availability through BPA. Due to the size of the Project and the timeline of the BPA interconnection process, it is not feasible from an economic or schedule standpoint to connect to the existing BPA 500-kV line that runs north-south through the wind farm site. No existing transmission line rights-of-way exist that would provide a possible direct route to connect the wind farm's substation to the existing BPA 230-kV line.

A transmission line route following the roads directly north of the proposed (and previously approved) transmission line route would be 20 percent longer than the current route (approximately 7.3 miles instead of 6 miles). Following this curved route would increase the capital cost of the line by over $1.7 million. This increased cost does not include the following factors involving cost and logistics:

- Existing distribution lines would need to be crossed; this would require an underbuild of the existing lines.
- The project substation would need to be relocated from the location agreed to by landowners; this could impact farming operations and would also require new design for the electrical collection layout
- Additional property rights along Adkisson road not included by the current lease boundary would incur additional cost
- The re-route may trigger new studies by BPA

It is not currently known whether there are existing utilities along these roads, but if there are, placing the transmission line along this route could also affect them.

The existing railroad right-of-way is located along the Deschutes River Canyon and would not provide a route between the wind farm and the point of interconnection on the existing 230-kV BPA line. Therefore, a section of new transmission line corridor is necessary to connect to the BPA substation.

(D) Public health and safety; or

Response: Summit Ridge is minimizing health and safety risks from exposure to magnetic fields or shock by limiting the length of the transmission line for the Project and locating the transmission line away from populated areas. However, the rationale for route selection was not based on health and safety risks.

(E) Other requirements of state or federal agencies

Response: As documented through the site certificate process and subsequent amendment processes, the Project complies with other requirements of state and federal agencies.

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

Response: Summit Ridge has designed the 230-kV transmission line to minimize, to the greatest degree practicable, impacts to EFU land. The 230-kV transmission line pole structures will permanently impact a fraction of 1 acre of land (likely less than 0.1 acre), thereby removing very little land from agricultural production. In addition, the transmission line is sited to minimize disturbing agricultural practices. The amount of new transmission line corridor has been minimized to the greatest extent practicable by following the shortest practicable route between the wind farm substation and the BPA substation. Landowners and farm operators will be compensated for the loss of land for agricultural production. In addition, when construction is completed, lands temporarily affected by construction will be restored to their original condition. Therefore, because permanent impacts of the 230-kV transmission line are minimal, and the transmission line has been sited in consideration of farming practices, it will not force a significant change in accepted farm practices or a significant increase in the cost of farm practices on the surrounding farmland.

(4)(c) The governing body of a county or its designee may consider costs associated with any of the factors listed in paragraph (a) of this subsection, but consideration of cost may not be the only consideration in determining whether the associated transmission line is necessary for public service. [2013 c.242 §2]

Response: Land costs were not a significant consideration in determining the location of the transmission line segment. No alternative location exists, regardless of cost, to locate the 230-kV transmission line exclusively on non-EFU land; however, the vast majority of the transmission line route is currently located on non-EFU land. The location was dependent on providing a connection for the energy generated by the wind energy facility to the electrical energy grid interconnection point.

Conclusion

Council may rely on its prior findings and this supplemental analysis of compliance with ORS 215.274 to determine that this amendment request complies with OAR 345-022-0030.

5.1.6 Protected Areas (OAR 345-022-0040)

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

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

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

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

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

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

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

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

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

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

(j) State estuarine sanctuaries, including but not limited to South Slough Estuarine Sanctuary, OAR chapter 142;

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

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

(m) Agricultural experimental stations established by the College of Agriculture, Oregon State University…

(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.

Response: Council previously found that the Project is not located in any protected area listed in OAR 345-022-0040, is not likely to result in significant adverse impacts to any protected area, and complies with the Protected Areas Standard.[13,14] The proposed extension to construction deadlines does not alter the analysis area, and no new Protected Areas have been added under OAR 345-022-0040 since the previous findings were reached.

This finding was based on an analysis of noise, traffic, water use, wastewater disposal, and visual impacts for the protected areas located within 20 miles of the Project (see Table 1).

Visual Impacts

As described in the Final Order on Amendment #2 (p. 115-117), although turbines would be visible from several protected areas, they would not result in a significant adverse visual impact. A summary of each finding is presented in Table 1.

Table 1. Visual Impacts in Protected Areas within 20 Miles of the Project

Protected Area	345-022-0040(1) Subparagraph Reference	Distance (Miles)	Project Visible?	Summary of Visual Impacts
Botanical/Scenic Areas within Columbia Gorge ACEC	(o)	15.8	No	None
Columbia Hills (Horsethief Lake) State Park	(h)	11.8	No	None
Cottonwood Canyon State Park	(h)	18.0	No	None
Doug's Beach State Park	(h)	14.8	No	None
John Day Federal Wild and Scenic River	(k)	18.4	No	None
John Day State Scenic Waterway	(k)	18.4	No	None
JS Burres State Recreation Site (BLM)	(h)	20.0	No	None
Lower Klickitat Federal Wild and Scenic River	(k)	18.3	No	None
Maryhill State Park	(h)	12.4	No	None
Mayer State Park	(h)	18.1	No	None
Memaloose State Park	(h)	19.8	No	None

[13] Final Order on the ASC, p. 81, August 19, 2011

[14] Final Order on Request for Contested Case, Amendment #2 and Request for Transfer of the Site Certificate, p. 117 (November 4, 2016)

Protected Area	345-022-0040(1) Subparagraph Reference	Distance (Miles)	Project Visible?	Summary of Visual Impacts
Tom McCall Preserve ACEC	(o)	17.4	No	None
White River Falls State Park	(h)	9.1	No	None
Badger Creek Wilderness Area	(c)	18.7	Yes	Distance and vegetation would screen and limit views of the Project.
Deschutes River State Recreation Area	(h)	9.0	Yes	Distance and vegetation would screen and limit views of the Project.
Heritage Landing (Deschutes) State Park	(h)	9.1	Yes	Distance and vegetation would screen and limit views of the Project.
John Day Wildlife Refuge	(d)	17.4	Yes	The Project would be visible from isolated, limited rims of the John Day River Canyon, but not from the river itself.
White River Federal Wild and Scenic River	(k)	8.5	Yes	The Project would be visible from isolated, limited rims of the White River Canyon, but not from the river itself.
White River State Wildlife Area	(p)	11.0	Yes	The Project would be visible from isolated, limited rims of the White River Canyon, but not from the river itself.
Columbia Basin Agriculture Research Area	(m)	6.9	Yes	The research center is not managed for its visual or scenic qualities. Distance and vegetation would screen and limit views of the Project.
Columbia Hills Natural Area Preserve	(i)	14.4	Yes	The preserve is managed for rare plant habitat rather than scenic quality. Distance and vegetation would screen and limit views of the Project.
Columbia River Gorge National Scenic Area (CRGNSA)	(g)	7.2	Yes	Much of land within CRGNSA from which turbines would be visible is not accessible to the public. Publicly assessible areas from which turbines may be visible are more than 14 miles from turbines.

Protected Area	345-022-0040(1) Subparagraph Reference	Distance (Miles)	Project Visible?	Summary of Visual Impacts
Deschutes Federal Wild and Scenic River	(k)	0.6	Yes	Views of turbines from various locations along the river will be limited to views of rotor blades at distances of 2 or more miles and would not dominate views but would be subordinate to the surrounding landscape.
Deschutes State Scenic Waterway	(k)	0.8	Yes	Views of turbines from various locations along the river will be limited to views of rotor blades at distances of 2 or more miles and would not dominate views but would be subordinate to the surrounding landscape.
Lower Deschutes Wildlife Area	(p)	2.0	Yes	Views of turbines from various locations along the river will be limited to views of rotor blades at distances of 2 or more miles and would not dominate views but would be subordinate to the surrounding landscape.

Noise Impacts

As analyzed in Amendment #2, up to four turbines may be located within 1 mile of the Deschutes Federal Wild and Scenic River boundary, with the closest turbine located approximately 0.72 mile from the boundary. Noise modeling conducted for Amendment #2 indicated that the maximum warranted sound power levels of turbines under consideration for the Project would be no greater than 109 dBA (plus 2 dBA uncertainty). Council therefore applied Site Certificate Condition 5.14, which requires Summit Ridge to place turbines no closer than 0.72 mile from any protected area, and that any turbine located within 1 mile of the Deschutes Federal Wild and Scenic River and Deschutes State Scenic Waterway would have a maximum sound power no greater than 109 dBA plus 2 dBA uncertainty. Extension of construction deadlines as described in RFA 4 will not limit Summit Ridge's ability to comply with this condition. Therefore, the requested amendment will not result in significant adverse noise impacts at any protected area within the analysis area.

Traffic, Water Use, and Wastewater Disposal Impacts

The extension of construction deadlines will not alter traffic, water use, and wastewater disposal impacts previously authorized for the Project. As previously found by Council[15], traffic demands on

[15] Final Order on the ASC, p. 79.

local roads and highways in the vicinity of the Project are low, and any effects during construction are expected to be temporary and negligible and will not adversely affect protected areas. Water use would be primarily during construction and would be temporary; water would be trucked in from the City of The Dalles primarily for dust suppression and concrete mixing. During operation, water use would be primarily for normal domestic purposes at the O&M building and would be supplied by an on-site well. Sanitary wastewater would be discharged to a permitted on-site septic system.

Conclusion

The proposed amendment makes no changes that would alter the basis for Council's earlier findings. Therefore, Council may find that this amendment request complies with OAR 345-022-0040.

5.1.7 Retirement and Financial Assurance (OAR 345-022-0050)

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

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

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

Response: Council previously found that Summit Ridge would meet Council's Retirement and Financial Assurance Standard, and that the estimate of $6.695 million (calculated in Q3 2010 dollars) was a reasonable estimate to restore the facility site.[16] This request does not seek to make any changes to the facility or tasks or actions necessary for facility decommissioning. There is no change to the maximum number of turbines, maximum generating capacity, or infrastructure locations from what was previously authorized. The total number of turbines at the facility will not exceed 72, and the generation capacity will not exceed 194.4 MW.

Council previously found that Summit Ridge, in relying on its parent company organization (Pattern Development and Pattern Energy Group 2 LP), had provided sufficient guarantee in the form of a bank letter to demonstrate its 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.[17]

Because the decommissioning cost estimate has not recently been updated, a new cost estimate has been prepared to estimate decommissioning costs for the facility as modified by Amendment 2 (see Attachment 6). As described in the Final Order on the ASC, p. 82, the site will be restored to a useful, non-hazardous condition by dismantling and removing all aboveground structures, and removing electrical equipment, pads, and foundations to a minimum depth of 3 feet below grade. Excavated areas will be backfilled with topsoil, and the surface topography will be blended with adjacent areas. Roads will be removed, and disturbed areas will be restored and replanted with native plant

[16] Final Order on Request for Transfer, Third Amended Site Certificate, p. 15 (December 15, 2017)

[17] Final Order on Request for Transfer, Third Amended Site Certificate, p. 16 (December 15, 2017)

seed mixes or agricultural crops, as appropriate. To prepare the cost estimate, the scope of work and individual tasks were established using professional experience by the Certificate Holder's engineering staff. The Project is broken into individual tasks that were each estimated separately to include labor requirements, equipment needs, and duration. Production rates were established using professional experience and published standards that include RS Means (www.rsmeans.com). Labor and equipment rates prevalent to the geographic area of the Project were obtained based on U.S. Department of Labor wage determinations.

The updated cost estimate is $9,874,000, which is more than the previous estimate but still less than the amount specified in the bank letter provided by the Certificate Holder during the Amendment 3 process, which established financial assurance and capability to obtain a bond or letter of credit up to $10,000,000. Therefore, the Council may rely on its prior findings[18] that the Certificate Holder can continue to comply with the Retirement and Financial Assurance standard.

Accordingly, the proposed amendment makes no changes that would alter the basis for Council's earlier findings, and therefore, Council may find that OAR 345-022-0050 is met.

5.1.8 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 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.

OAR 635-415-0025 Requirements (Implementation of Department Habitat Mitigation Recommendations):[19]

(1) "Habitat Category 1" is irreplaceable, essential habitat for a fish or wildlife species, population, or a unique assemblage of species and is limited on either a physiographic province or site-specific basis, depending on the individual species, population or unique assemblage.

*(a) The mitigation goal for Category 1 habitat is no loss of either habitat quantity or quality. ****

(2) "Habitat Category 2" is essential habitat for a fish or wildlife species, population, or unique assemblage of species and is limited either on a physiographic province or site-specific basis depending on the individual species, population or unique assemblage.

*(a) The mitigation goal if impacts are unavoidable, is no net loss of either habitat quantity or quality and to provide a net benefit of habitat quantity or quality. ****

[18] Final Order on Request for Transfer, Third Amended Site Certificate, p. 16 (December 15, 2017)

[19] The provisions cited under OAR 635-415-0025 are included only in part, rather than in their entirety, for purposes of brevity.

(3) "Habitat Category 3" is essential habitat for fish and wildlife, or important habitat for fish and wildlife that is limited either on a physiographic province or site-specific basis, depending on the individual species or population.

*(a) The mitigation goal is no net loss of either habitat quantity or quality. ****

(4) "Habitat Category 4" is important habitat for fish and wildlife species.

*(a) The mitigation goal is no net loss in either existing habitat quantity or quality. ****

(5) "Habitat Category 5" is habitat for fish and wildlife having high potential to become either essential or important habitat.

*(a) The mitigation goal, if impacts are unavoidable, is to provide a net benefit in habitat quantity or quality. ****

(6) "Habitat Category 6" is habitat that has low potential to become essential or important habitat for fish and wildlife.

*(a) The mitigation goal is to minimize impacts. ****

Response: Council previously found that the Project complies with Council's Fish and Wildlife Habitat Standard.[20, 21] This finding was based on a detailed analysis of habitat, plants, and wildlife within the analysis area, which includes the area within the site boundary and the area within a half-mile of the site boundary. Habitat delineation was conducted using field and desktop methodologies in 2009. Information on plants and wildlife within the analysis area was gathered from the U.S. Fish and Wildlife Service and the Oregon Biodiversity Information Center, as well as information gathered from surveys at nearby wind projects. Plant and wildlife surveys were conducted in 2009–2010., Figure 7 shows the most recent habitat categorization mapping for the Project. This figure shows habitat categorization performed by Northwest Wildlife Consultants in 2009 to support the 2010 ASC, with additional desktop analysis to map the entire Exhibit P analysis area (site boundary plus 0.5 mile). The extent of areas burned during 2018 fires is provided as Figure 8, and ODFW's big game winter range designation is provided as Figure 9. Despite the potential changes to habitat resulting from 2018 wildfires in the Project area, habitat categorization conducted in 2009 provides the most conservative approach to habitat classification because the likely effect of the 2018 fires is an overall lowering of habitat quality and the change of some shrub-steppe and some native perennial to exotic annual grasslands. The Certificate Holder affirms that there has been no change to facility-related impacts or assumptions since they were calculated under Amendment 2, and that the calculations presented in Amendment 2 are correct and reasonable based on currently available information for the indicated layout. The Certificate Holder

[20] Final Order on the ASC, p. 106 (August 19, 2011)

[21] Final Order on Request for Contested Case, Amendment #2 and Request for Transfer of the Site Certificate, p. 120-130 (November 4, 2016)

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[1]	2016 ODFW Status[2]	Occurrence in the Analysis Area
Reptiles				
California mountain kingsnake	*Lampropeltis zonata*	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	*Sceloporus graciosus graciosus*	SV	S	Not documented during surveys. Habitat is sagebrush and xeric habitats (ODFW 2017), which are present in the analysis area.
Birds				
Bald eagle	*Haliaeetus leucocephalus*	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	*Spizella breweri breweri*	Not Listed	S	Documented during surveys. This species prefers sagebrush habitat (ODFW 2017); habitat is present in the analysis area.
Burrowing owl (western)	*Athene cunicularia hypugaea*	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	*Chordeiles minor*	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[1]	2016 ODFW Status[2]	Occurrence in the Analysis Area
Willow Flycatcher (Eastern Oregon)	*Empidonax traillii (adastus)*	SV	Not Listed in Columbia Plateau	Not Considered.
Ferruginous hawk	*Buteo regalis*	SC	SC	Documented during surveys. Occurs in open landscapes east of the Cascade Mountains (ODFW 2017).
Golden eagle	*Aquila chrysaetos*	Not Listed	Not Listed	Documented during surveys. Not an ODFW Sensitive Species; however, golden eagles have been monitored during surveys.
Grasshopper sparrow	*Ammodramus savannarum perpallidus*	SV	S	Documented during surveys. Habitat is present in the analysis area in open grasslands. Commonly observed in the analysis area.
Lewis's woodpecker	*Melanerpes lewis*	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	*Lanius ludovicianus*	SV	S	Documented during surveys. Breeds in open habitat east of the Cascades (ODFW 2017).
Long-billed curlew	*Numenius americanus*	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	*Artemisiospiza nevadensis*	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	*Buteo swainsoni*	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	*Centrocercus urophasianus*	SV	Not Listed in Columbia Plateau	Not Considered.
Mammals				
Hoary bat	*Lasiurus cinereus*	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	*Myotis volans*	SV	Not Listed in Columbia Plateau	Not Considered.
Pallid bat	*Antrozous pallidus*	SV	S	Documented during surveys. Non-migratory species with typical foraging flight height below turbine.
Silver-haired bat	*Lasionycteris noctivagans*	SU	S	Documented during surveys. Probable migrant through analysis area and susceptible to turbine strike.

Common Name	Scientific Name	2008 ODFW Status[1]	2016 ODFW Status[2]	Occurrence in the Analysis Area
Spotted bat	*Euderma maculatum*	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	*Corynorhinus townsendii*	SC	SC	Not documented during surveys. Non-migrant and uncommon.

This table is updated from Attachment P-2 of the Application for Site Certificate (August 2010).

1. 2008 ODFW Status: SC = Sensitive Critical, SV = Sensitive Vulnerable

2. 2017 ODFW Status: SC = Sensitive Critical, S = Sensitive

Sources:

ODFW (Oregon Department of Fish and Wildlife). 2008. Oregon Department of Fish and Wildlife Sensitive Species List.

ODFW. 2016. Oregon Department of Fish and Wildlife Sensitive Species List. Available online at: http://www.dfw.state.or.us/wildlife/diversity/species/docs/2017_Sensitive_Species_List.pdf.

ODFW. 2017. Wildlife Viewing website. Accessed December 22, 2017; available at: https://myodfw.com/wildlife-viewing.

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:

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

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

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

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

Response: Council previously determined that the Project complies with the Threatened and Endangered Species Standard.[22, 23] This finding was based on extensive plant and wildlife desktop and field surveys conducted in 2009–2010 and updated in 2015–2016. Risks to avian species will be mitigated by placing the majority of facility collector lines underground and by adhering to the Avian Power Line Interaction Committee suggested practices for raptor protection on power lines. Meteorological towers will be non-guyed structures, and turbine towers will be smooth tubular structures to avoid creating perching opportunities. Summit Ridge will implement post-construction monitoring and mitigation in accordance with the Wildlife Monitoring and Mitigation Plan, and additional mitigation measures could be required depending on the results of this monitoring.

In preparation of this RFA 4, Summit Ridge reviewed ODFW's Threatened and Endangered Fish and Wildlife list and Oregon Department of Agriculture's (ODA) Threatened and Endangered Plants list. The language in OAR 345-021-0010(q)(A) has been changed since the original application and no longer includes species listed as threatened or endangered under the federal Endangered Species Act (16 USC 1533). Therefore, the Certificate Holder updated Table Q-1 (see Table 3 below) to omit the federal status and update the current state status of species. The table title was modified to reflect this change. A column was added to show any changes to the state status since 2009 for state-listed threatened, endangered, and candidate plants and state-listed threatened and endangered wildlife. In addition, the Certificate Holder requested, received, and reviewed an October 2018 version of the Oregon Biodiversity Information Center (ORBIC) database within the analysis area. The results of this request are provided in Table 3.

[22] Final Order on the ASC, p. 110 (August 19, 2011)

[23] Final Order on Request for Contested Case, Amendment #2 and Request for Transfer of the Site Certificate p. 130-132 (November 4, 2016)

Table 3. List of State Threatened and Endangered Species with Potential Occurrence in the Exhibit Q Analysis Area

Name	State Status		Typical Habitat	Likelihood of Occurrence	Identification Period (Plants only)
	2009	2018			
WILDLIFE					
Bald eagle *Haliaeetus leucocephalus*	LT	Delisted	Nests in large, dominant trees with exposed limbs capable of supporting large nest structure, usually within 1 mile of a large waterbody; winters along large rivers and reservoirs. Bald eagles are no longer tracked in the ORBIC database.	Low	NA
PLANTS					
Tygh Valley milk-vetch *Astragalus tyghensis*	LT	LT	Dry, rocky, sandy-clay soils and grassy slopes, common in sagebrush-bunchgrass communities. No ORBIC occurrences within the analysis area.	Moderate	Late May – Mid June
Henderson's ricegrass *Achnatherum hendersonii*	C	C	Dry shallow rocky soils derived from basalt in sagebrush or ponderosa pine. Soils are often subject to frost heave. No ORBIC occurrences within the analysis area.	Low	May – June
Dwarf evening-primrose *Camissonia pygmaea*	C	C	Dry plains and slopes with unstable soils or on gravel in steep talus, dry washes, banks and road-cuts. Elevation: 200 to 500 feet. No ORBIC occurrences within the analysis area.	Moderate	June – August
Diffuse stickseed *Hackelia diffusa var. diffusa*	C	C	Shaded areas, cliffs, talus, wooded flats and slopes, tending closer to the Columbia Gorge than *H. d. var. cottanii*. Elevations: 1,000 feet. No ORBIC occurrences within the analysis area.	Low	May – June
Hepatic monkeyflower *Mimulus jungermannioides*	C	C	Basalt crevices in seepage zones in vertical cliff faces and canyon walls. Elevation: 500 to 3,300 feet. No ORBIC occurrences within the analysis area.	Low	May – Late August

Listing Status: LT = Listed Threatened, C = Candidate

This table updated from Table Q-1 of the Application for Site Certificate (August 2010).

Sources:

October 2018 version of the ORBIC database within the analysis area

Oregon Department of Fish and Wildlife. 2018. Threatened, Endangered, and Candidate Fish and Wildlife Species in Oregon. Available online at: http://www.dfw.state.or.us/wildlife/diversity/species/docs/Threatened_and_Endangered_Species.pdf.

Oregon Department of Agriculture. 2018. Oregon Listed Plants by County for Wasco County. Available online at: http://www.oregon.gov/ODA/programs/PlantConservation/Pages/ListedPlants.aspx.

Review of the ORBIC database does not warrant inclusion of any additional threatened and endangered species because there are no state-listed threatened or endangered species identified by ORBIC within the analysis area.

Since 2009, the bald eagle has been delisted by ODFW; therefore, an analysis of the effects of the facility on the bald eagle is no longer required to meet the Threatened and Endangered Species Standard. Regardless, the analysis provided in Exhibit Q is still applicable, and the facility is not expected to affect the bald eagle.

The ODA status of the five plant species included in the original Exhibit Q analysis has not changed since 2009. The Tygh Valley milk-vetch is no longer within the Exhibit Q analysis area due to changes in the site boundary; Exhibit Q previously stated that one record occurred within the analysis area. The absence of an ORBIC occurrence within the analysis area for Tygh Valley milk-vetch neither alters its likelihood of occurrence in the analysis area, because potential habitat still exists, nor does it change the findings in Exhibit Q that conclude that construction of the facility will have no effect on the species.

This 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 thus, this request complies with OAR 345-022-0070.

5.1.10 Scenic Resources (OAR 345-022-0080)

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

(2) The Council may issue a site certificate for a special criteria facility under OAR 345-015-0310 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.

Response: Council previously found that the Project complies with the Scenic Resources Standard.[24]

The Council addressed the Scenic Resources Standard in Section IV.I of the Final Order on the ASC, Section III.B.3.j of the Amended Final Order on Amendment #1, and Section III.B.10 of the Final Order on Request for Contested Case, Amendment #2 and Request for Transfer of the Site Certificate. Final Order on Request for Transfer (Third Amended Site Certificate) solely sought to

[24] Final Order on Request for Contested Case, Amendment #2 and Request for Transfer of the Site Certificate, p. 141 (November 4, 2016)

change ownership of the facility, and therefore, did not address or make any changes that would affect compliance with the Scenic Resources Standard. The Council found that, subject to specified conditions to ensure adequate mitigation, the design, construction, and operation of the facility were not likely to result in significant adverse impacts to scenic resources and values identified as significant or important in local land use plans, tribal land management plans, and federal land management plans for any lands located within the analysis area.[25] No new scenic resources have been listed within the site boundary or within 10 miles of the Project based on the current WCCP.[26] The applicable management plans, including those listed below, have not been updated since they were last analyzed for Amendment #2:

- Columbia River Gorge National Scenic Area (CRGNSA)
- State Scenic Waterway Program
- Lower Deschutes River Management Plan
- Two Rivers Resource Management Plan
- White River National Wild and Scenic River Management Plan
- John Day River Canyon Management Plan
- Mt. Hood National Forest Land and Resource Management Plan
- Oregon National Historic Trail Management Plan
- Journey Through Time Scenic Byway Management Plan
- Wasco County Comprehensive Plan
- Sherman County Comprehensive Plan

In the Final Order on the ASC and subsequent amendments, Council considered the Project's impact to the following scenic resources identified by the applicable resource plans within the analysis area:

- CRGNSA
- The Lower Deschutes River Canyon
- The White River Canyon
- Resources in the John Day River Canyon
- The Mt. Hood National Forest
- The Oregon National Historic Trail
- The Journey Through Time Scenic Byway
- Wasco County Resources
- Sherman County Resources

[25] Final Order on the ASC, p. 121 (August 19, 2011)

[26] Wasco County. 2010. Wasco County Comprehensive Plan. Prepared by the Wasco County Planning and Development Office. Accessed at: https://co.wasco.or.us/docs/Planning%20Reference/CompPlan_Ch1-20_MERGED_Searchable.pdf.

The management plans described in ASC Exhibit R were reviewed to determine whether any had been modified or whether additional plans should be considered. This review resulted in the following findings:

- The CRGNSA management plan (1992, revised May 10, 2004) has been amended through 2016, but no changes were made to the scenic resources that were already confirmed within the analysis area as described in the ASC Exhibit R.

The following management plans have been confirmed to not have been updated since originally cited:

- Wasco (City) Comprehensive Land Use Plan, June 2003
- Spokane Resource Management Plan and Record of Decision, May 1987
- Maupin Comprehensive Land Use Plan, 1980
- Moro Comprehensive Land Use Plan, July 1978
- Rufus Comprehensive Land Use Plan, June 1978
- Grass Valley Comprehensive Land Use Plan, April 1978
- Comprehensive Plan for the City of Dufur, OR, 1977.

The following management plans have been updated as noted:

- Hood River County Comprehensive Land Use Plan (OR) – amended 2011, and no new scenic resources; no changes were made to the scenic resources that were already confirmed (in ASC Exhibit R) as not significant visual or aesthetic resources within the analysis area.
- Comprehensive Plan for Land Use in Gilliam County, May 1977 (amended 1987) – amended May 2017, and no new scenic resources; no changes were made to the scenic resources that were already confirmed (in ASC Exhibit R) as not significant visual or aesthetic resources within the analysis area.
- Klickitat County (WA) Comprehensive Plan August 1977 – amended March 2015 natural resources energy/mineral resource land sections, but no changes were made to the scenic resources that were already confirmed (in ASC Exhibit R) as not significant visual or aesthetic resources within the analysis area.
- Goldendale (WA) Comprehensive Land Use Plan, 1999 – amended 2014, but no changes were made to the scenic resources that were already confirmed (in ASC Exhibit R) as not significant visual or aesthetic resources within the analysis area.
- City of the Dalles Comprehensive Plan, December 1982 – amended May 2011, but the Project is not located within city limits; therefore, as confirmed in the ASC Exhibit R, no impacts will be made to trees/open space/rural scenic character (per requirements of plan).

The Council included three site certificate conditions to mitigate adverse impacts to scenic resources. These conditions include measures such as mounting the nacelle on smooth uniform steel structures that are painted uniformly in a low-reflectivity neutral gray, white, or off-white color, and requiring the minimum turbine lighting required by law.

Columbia River Gorge National Scenic Area

In the Final Order on the ASC and subsequent amendments, the Council found that the facility would generally be visible in the CRGNSA at approximately 11 miles away, from State Route 14 in Washington state, and in areas generally not accessible to the public. In addition, the Council concluded that the CRGNSA and its associated management plan protect scenic resources within the CRGNSA, but do not preclude development on private property outside the CRGNSA. Finally, the Council found that there are a number of existing development features between the proposed facility and the scenic resources within the CRGNSA that would detract from the visual character of the area.[27] Extending construction deadlines would not alter the basis of the Council's previous finding that Summit Ridge is not likely to have a significant adverse effect on the identified scenic resources associated with the CRGNSA.

Lower Deschutes River Canyon

The Council previously assessed the facility's impact to the Lower Deschutes River Canyon in Section IV.I.1.a.ii of the Final Order on the ASC and subsequent amendments, and found that the facility would not cause a significant adverse impact to identified resources within the Lower Deschutes River Canyon. The Council found that while the facility would likely be visible from the canyon floor and the Deschutes River, the turbines would be subordinate to the surrounding landscape and would not dominate the views from the river canyon. Additionally, the Council found that the applicable land management plans do not regulate lands beyond the boundaries of "related adjacent land" (defined as land within a quarter-mile of the riverbank). The land within the site boundary is outside state and federal management jurisdiction. As such, the Council concluded that the facility is not likely to have significant adverse impacts to identified scenic resources associated with the Deschutes River Canyon.[28, 29]

The proposed construction deadline extensions would not alter the basis of the Council finding that Summit Ridge is not likely to have a significant adverse effect on the identified scenic resources associated with the Deschutes River Canyon.

White River Canyon

The Council analyzed the impacts to the White River Canyon in Section IV.I.1.a.iii of the Final Order on the ASC and in subsequent amendments. Council found that the facility would not cause significant adverse impacts to the visual characteristics of the White River Canyon because the facility would not be visible from the river or its shoreline and would only be visible from remote and inaccessible locations from higher canyon walls. Additionally, the Council found in the Final

[27] Final Order on the ASC, p. 114-116 (August 19, 2011)

[28] Final Order on the ASC, p. 117-118 (August 19, 2011)

[29] SRWAMD2Doc1 Request for Amendment No.2 2016-02-17; SRWAMD2Doc22 Certificate Holder Responses to AIRs 2016-07-20

Order on the ASC that the previously approved facility would not be visible from White River Falls State Park.[30]

The proposed extension to construction deadlines does not alter the basis of the Council's previous finding that the Project would not have significant adverse impacts to the scenic resources and values identified in the White River National Wild and Scenic River Management Plan.

John Day River Canyon

The Council analyzed the impacts to the resources identified in the John Day River Canyon in Section IV.I.1.a.iv of the Final Order on the ASC and in subsequent amendments. The Council found that the facility would not cause a significant impact to the visual characteristics of the resources in the John Day River Canyon because the facility would be visible only from small portions of the higher canyon walls and rims at distances of more than 18 miles.[31, 32]

The proposed extension to construction deadlines does not alter the basis of the Council's prior finding that the Project would not have significant adverse impacts to the scenic resources and values identified in the John Day River Canyon Management Plan and the Two Rivers Resource Management Plan.

Mt. Hood National Forest

The Council analyzed the impacts to the Mt. Hood National Forest in Section IV.I.1.a.v of the Final Order on the ASC and in subsequent amendments. The Council found that the facility would not have significant adverse visual impacts on the Mt. Hood National Forest because the Project would be 15 miles away from the forest, and access to the areas where the facility would be visible is limited. Furthermore, the forest is heavily treed, which would further reduce any views from the forest to the facility. Additionally, the Council found that the Mt. Hood National Forest Land and Resource Management Plan guides the management of visual resources within the forest itself, including limiting logging and other man-made development in the forest. This has the effect of maintaining forested vegetation, which would obscure possible views to the facility.[33, 34, 35]

The proposed construction deadline extensions do not alter the basis of the Council's prior findings that the Project would not have significant adverse impacts to the scenic resources and values identified as important in the Mt. Hood National Forest Land and Resource Management Plan.

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[30] Final Order on the ASC, p. 118 (August 19, 2011)

[31] Final Order on the ASC, p. 118 (August 19, 2011)

[32] SRWAMD2Doc1 Request for Amendment No.2 2016-02-17; SRWAMD2Doc22 Certificate Holder Responses to AIRs (AIR 12) 2016-07-20

[33] Final Order on the ASC, p. 119 (August 19, 2011)

[34] Amended Final Order on Amendment #1, p. 85 (August 7, 2015)

[35] SRWAMD2Doc1 Request for Amendment No.2 2016-02-17; SRWAMD2Doc22 Certificate Holder Responses to AIRs (AIR 12) 2016-07-20

Oregon National Historic Trail

The Council analyzed the impacts to the Oregon National Historic Trail in Section IV.I.1.a.vi of the Final Order on the ASC and subsequent amendments. The Council found that the Project would not be visible from the four high-potential sites identified by the Oregon National Historic Trail Management Plan (Deschutes River Crossing, The Dalles Complex, Tygh Valley, and Biggs Junction).[36, 37]

The proposed construction deadline extensions do not alter the basis for the Council's prior finding that the Project would not have significant adverse impacts to the scenic resources and values identified as important in the Oregon National Historic Trail Management Plan.

Journey Through Time Scenic Byway

The Council analyzed the impacts to the Journey Through Time Scenic Byway in Section IV.I.1.a.vii of the Final Order on the ASC and subsequent amendments. The Council found that the facility would be visible in the background along portions of the byway, but would be subordinate to the surrounding landscape, and that the facility is compatible with the byway's stated goals, in particular the goals of job creation and building a regional identity. In addition, the Council found that there are other wind turbines that have already been developed in this area that would be visible from the Journey Through Time Scenic Byway.[38, 39, 40]

The proposed extensions to construction start and completion deadlines do not alter the basis of the Council's prior finding that the Project would not have significant adverse impacts to the scenic resources and values identified as important in the Journey Through Time Scenic Byway Management Plan.

Wasco County Resources

The Council analyzed the impacts to Wasco County Resources identified by the WCCP in Section IV.I.1.a.viii of the Final Order on the ASC and in subsequent amendments. These resources included Interstate 84 (I-84) east of The Dalles, Highway OR-197 between I-84 and Dufur, Highway OR-197 from Tygh Ridge extending 13 miles south, the CRGNSA, and Pine Hollow Lake. Impacts to the CRGNSA were discussed above. The analysis determined that the facility would not be visible from Pine Hollow or I-84. The Council found that even though the facility would be visible from portions of Highway OR-197 at a distance of 7.6 miles to 1.8 miles, given the intermittent nature of the views, the distance, and the presence of existing transmission lines, the facility would have minimal

[36] Final Order on the ASC, p. 119 (August 19, 2011)

[37] Amended Final Order on Amendment #1, p. 86 (August 7, 2015)

[38] Final Order on the ASC, p. 120 (August 19, 2011)

[39] Amended Final Order on Amendment #1, p. 86 (August 7, 2015)

[40] SRWAMD2Doc1 Request for Amendment No.2 2016-02-17; SRWAMD2Doc22 Certificate Holder Responses to AIRs (AIR 12) 2016-07-20

impacts on the identified Wasco County Resources.[41, 42,43] Consistent with the Council's finding in the Final Order on the ASC, the facility, as amended, would still be located away from Highway OR-197 scenic areas, the views from the road to the facility would be intermittent, and there are existing features including transmission lines in the viewshed.

Therefore, the Council finds that the facility, as amended, would not have significant adverse impacts to the scenic resources and values identified as important in the WCCP.

Sherman County Resources

The Council analyzed the impacts to Sherman County resources identified in the Sherman County Comprehensive Plan in Section IV.I.1.a.ix of the Final Order on the ASC and in subsequent amendments. The Sherman County Comprehensive Plan and associated policies call for encouraging the preservation of the rural nature of the Sherman County landscape including protecting trees when practical. The Council found in the Final Order on the ASC that the facility would not impact trees or the rural nature of Sherman County, particularly considering that the facility is located entirely within Wasco County.[44]

The facility, as amended by extending construction deadlines, would remain outside the borders of Sherman County and would therefore not change the basis for the Council's prior finding that the facility, as amended, would not have significant adverse impacts to the resources identified in the Sherman County Comprehensive Plan.

Conclusion

This 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. There have been no changes to management plans that would affect prior analyses or conclusions for the various scenic resources. Additionally, there is no change to the previously approved maximum turbine height and blade tips of the Project. Consequently, the proposed amendment makes no changes that would alter the basis for Council's earlier findings, and therefore, Council may find that the amendment request satisfies OAR 345-022-0080.

[41] Final Order on the ASC, p. 120 (August 19, 2011)

[42] Amended Final Order on Amendment #1, p. 86 (August 7, 2015)

[43] SRWAMD2Doc1 Request for Amendment No.2 2016-02-17; SRWAMD2Doc22 Certificate Holder Responses to AIRs (AIR 12) 2016-07-20

[44] Final Order on the ASC, p. 121 (August 19, 2011)

5.1.11 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.

Response: Council previously found that the Project satisfied the Historic, Cultural and Archaeological Resources Standard.[45, 46]

The requested extension to construction deadlines would not increase ground disturbance or otherwise alter the Council's previous findings regarding the Historic, Cultural and Archaeological Resources Standard. The Certificate Holder will remain subject to the conditions included in the original Site Certificate.

Tetra Tech conducted an updated literature review of the Site Boundary on November 21, 2018. The State Historic Preservation Office's databases of cultural resources (Oregon Archaeological Records Remote Access and Historic Sites Database) were consulted. All cultural resources documented in these databases as within the Site Boundary were reported in the original surveys for the Project (Rooke 2010a,b)[47, 48]. No cultural resources have been recorded in the Site Boundary since the original surveys or issuance of the Site Certificate.

The Project will avoid direct impacts to all cultural and archaeological resources identified during field cultural surveys (see Site Certificate Condition V.B.2.1). Condition V.B.2.6 requires that an Archaeological Monitoring Plan be developed and implemented prior to construction in order to

[45] Final Order on Request for Contested Case, Amendment #2 and Request for Transfer of the Site Certificate p. 142 (November 4, 2016)

[46] Final Order on the ASC, p. 137-138 (August 19, 2011)

[47] Rooke, L.C. 2010a. Archaeological Survey for the Summit Ridge Wind Project, Wasco County, Oregon. AMEC Earth & Environmental, Inc., Bothell, Washington. Submitted to LotusWorks, Vancouver, Washington. AMEC Project #9-915-16682-0. SHPO Report #23004.

[48] Rooke, L.C. 2010b. Archaeological Survey of the Summit Ridge Wind Project, Wasco County, Oregon - Addendum 1, Transmission Line Corridors. AMEC Earth & Environmental, Inc., Bothell, Washington. Submitted to LotusWorks, Vancouver, Washington. AMEC Project #9-915-16682-0. SHPO Report #23006.

address and mitigate impacts from discovery of previously unidentified cultural properties during construction or operation of the facility. The Certificate Holder has reached out to the Confederated Tribes of the Warm Springs Reservation of Oregon to inform them of the change in project ownership and plan to extend construction deadlines, and will notify the Oregon Department of Energy if further discussions take place.

Based on its review of the information in Exhibit S of the ASC, the foregoing findings and other evidence in the record, and, in accordance with ORS 469.501 (4) and OAR 345-022-0090(2) the Council included Site Certificate conditions to address impacts of the facility on Historic, Cultural and Archaeological Resources.

This 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. The proposed amendment makes no changes that would alter the basis for Council's earlier findings, and OAR 345-022-0090 is met.

5.1.12 Recreation (OAR 345-022-0100)

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

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

(b) The degree of demand;

(c) Outstanding or unusual qualities;

(d) Availability or rareness;

(e) Irreplaceability or irretrievability of the opportunity.

Response: Council previously found that the Project would comply with the Recreation Standard.[49] The Council addressed the Recreation Standard in Section IV.J of the Final Order on the ASC, Section III.B.3.l of the Amended Final Order on Amendment #1, and Section III.B.12 of the Final Order on Request for Contested Case, Amendment #2 and Request for Transfer of the Site Certificate. Final Order on Request for Transfer (Third Amended Site Certificate) solely sought to change ownership of the facility and therefore did not address or make any updates that would affect compliance with the Recreation Standard. The Council identified four important recreational resources: the

[49] Final Order on Request for Contested Case, Amendment #2 and Request for Transfer of the Site Certificate, p. 1144 (November 4, 2016)

Deschutes River Corridor, Mack's Canyon Archaeological and Recreational Site, the Lower Deschutes Back Country Byway, and Wasco County Scenic Highway Segments. The Amended Final Order on Amendment #1 also considered potential impacts to Cottonwood Canyon Park, a state recreation area that opened after the original site certificate was issued. The Council found that the design, construction, and operation of the facility, as originally proposed and as amended, were not likely to result in a significant adverse impact to any important recreational opportunities in the analysis area.[50] No new recreational resources have been listed within the site boundary or within 5 miles of the Project based on the current version of the WCCP.[51] The Council did not impose any conditions related to this standard.

The Request for Amendment #2 to add a new turbine option that would have a shorter turbine hub height, a larger rotor diameter, a shorter overall maximum height, and fewer total number of turbines than the existing option affected the analysis of compliance with this standard. As discussed in Section III.B.3.j of the Amended Final Order on Amendment #1, the existing turbine option would likely be visible from the Lower Deschutes River Canyon, but the impacts would be intermittent and subordinate to the landscape. As such, the visual impacts should not have a significant adverse impact on the opportunities for fishing, rafting, camping, and other recreational activities available in the Lower Deschutes River Canyon. As discussed in Section III.B.10, Scenic Resources of Amendment #2, because of the general inaccessibility of the areas where visibility of the facility under the new turbine option would slightly increase over the existing turbine option, and given the predicted reduction in visibility from the river, the Council found that the facility, as amended, would not result in a significant adverse visual impact to the Lower Deschutes River Canyon. The same analysis applied to the Lower Deschutes Back Country Byway and Mack's Canyon Archaeological and Recreational Site because they are both located within the Lower Deschutes River Canyon and provide similar recreational opportunities. Section III.B.10, Scenic Resources, wherein the Council found that the facility, as amended, would not have significant adverse impacts to the scenic resources and values identified as important in the WCCP, contains the analysis for visual impacts to Wasco County Scenic Highway segments, which were identified for their value to road touring (a recreational opportunity).

Deschutes River Corridor

The Deschutes River within the recreation analysis area is designated as a federal Wild and Scenic River, classified as a recreational river area, and a State Scenic Waterway. A section of the Deschutes River within the analysis area is also part of the Lower Deschutes Wildlife area. Public access within the analysis area is generally gained via the Lower Deschutes River Back Country Byway, which follows a Bureau of Land Management (BLM) road along the east bank of the river and ends at Mack's Canyon. Primary recreational uses at the site include boating, rafting, fishing,

[50] Final Order on the ASC, p. 124 (August 19, 2011)

[51] Wasco County. 2010. Wasco County Comprehensive Plan. Prepared by the Wasco County Planning and Development Office. Accessed at: https://co.wasco.or.us/docs/Planning%20Reference/CompPlan_Ch1-20_MERGED_Searchable.pdf.

hiking, and camping. Secondary uses include upland bird hunting, sightseeing, and nature/wildlife photography.

Mack's Canyon Archaeological and Recreational Site

Mack's Canyon was identified in the Two River Resource Management Plan as a Special Management Area for its unusual prehistoric significance. The area contains evidence of winter dwellings of native peoples. Round pit-house remnants were unearthed and documented in the late 1960s, and the site is also listed in the National Register of Historic Places.

Lower Deschutes Back Country Byway

The Lower Deschutes Back Country Byway is a BLM road that winds along the east bank of the Deschutes River from the town Maupin northward, terminating at Mack's Canyon Recreation Area. The gravel road is a popular river access point for anglers and boaters. Other recreational uses include wildlife viewing, hiking, and upland bird hunting access. There are no developed viewpoints or waysides in the analysis area. The byway has outstanding quality since it follows the bank of the Deschutes River, providing scenic, recreational and wildlife viewing opportunities.

Wasco County Scenic Highway Segments

The WCCP identified portions of several highways within the county as scenic highway corridors. A portion of one scenic highway occurs within the recreation analysis area: U.S. Highway 197 between Fivemile Creek and the town of Dufur. The primary recreational use includes road touring. There are no developed viewpoints along this portion of the highway. The highway is adjacent to scenic areas, historic sites, and areas of natural beauty.

Cottonwood Canyon State Park

Since the Final Order on the ASC, a new state recreation area was opened within the analysis area. Cottonwood Canyon State Park opened in September 2013 and is located 18.5 miles from the facility. Because of the distance of the facility from the park, even if Cottonwood Canyon Park was an important recreational opportunity under the relevant factors, the recreational opportunities available at the park are not likely to be impacted by the facility. Council previously found that the proposed facility would be inaudible in the park and would not be visible from the park.[52]

All sites were found to have negligible traffic and visual impacts.[53] U.S. Highway 197 is the primary access route linking the Project site to other local highways. Short-term traffic delays are expected but are not anticipated to have an adverse impact on highways or overall traffic movement. Visual simulations confirmed that portions of turbines will be intermittently visible from various locations along the Deschutes River, including some areas along the Deschutes Backcountry Scenic Byway that parallels the river between Maupin and Mack's Canyon. Portions of some turbines may be visible near Mack's Canyon Archaeological and Recreational Area. Visible portions of turbines may include turbine blades, nacelles, and in some cases, portions of the tower. It is also possible that

[52] SRWAMD1Doc55 Response to RAI 1 and Attachment D to the Final Order on Request for Contested Case, Amendment #2 and Request for Transfer of the Site Certificate, p. 142-144 (November 4, 2016)

[53] Final Order on the ASC, p. 124 (August 19, 2011)

several turbines visible from the Deschutes River will require Federal Aviation Administration (FAA) lighting, thus increasing impacts to the night sky. In general, views of turbines would be limited to views of blades at distances of 2 or more miles. The turbines that are visible from the Deschutes River will not dominate the views and will generally be subordinate to the surrounding landscape. Therefore, the visual impacts of the proposed facility on recreational opportunities in the analysis area would be negligible.

The Council found that the design, construction, and operation of the facility, as originally proposed and as amended, were not likely to result in a significant adverse impact to any important recreational opportunities in the analysis area.[54] The Council did not impose any conditions related to this standard in any of the amendment final orders.

This 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. The proposed amendment makes no changes that would alter the basis for Council's earlier findings, and therefore, the amendment request meets the requirement of OAR 345-022-100.

5.1.13 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.

Response: Council relied on information provided by Summit Ridge in the ASC and in subsequent amendment requests to conclude that the Public Services Standard has been met.[55, 56] This information included measures to mitigate impacts to the ability of providers to provide public services, along with representations from local service providers that they were able to provide

[54] Final Order on Request for Contested Case, Amendment #2 and Request for Transfer of the Site Certificate, p. 144 (November 4, 2016)

[55] Final Order on the ASC, p. 139-143 (August 19, 2011)

[56] Final Order on Request for Contested Case, Amendment #2 and Request for Transfer of the Site Certificate, p. 146 (November 4, 2016)

these services. Mitigation measures were incorporated into the Site Certificate conditions.[57] The extension of construction start and completion deadlines does not affect Summit Ridge's ability to comply with the Site Certificate conditions as written.

Certain assumptions were made regarding local populations and service providers. Those assumptions are summarized and updated below.

Population Assumptions

While the Project itself is entirely within Wasco County, the analysis area includes portions of Gilliam, Hood River, Sherman, and Wasco counties in Oregon and Klickitat County in Washington, and incorporated communities with a 30-mile radius of the Project site. Incorporated communities within the 30-mile analysis area are: Arlington, Condon, Dufur, Grass Valley, Hood River, Maupin, Moro, Mosier, Rufus, Shaniko, The Dalles, and Wasco in Oregon, and Bingen, Goldendale, and White Salmon in Washington. The 2008 population for all of these communities was 30,925. Since then, some communities have grown larger while others have lost population, and the total population of the same communities estimated for 2017 is 34,066[58], an increase of approximately 10 percent. The largest community in the analysis area continues to be The Dalles, with a 2017 population of approximately 15,646.

Housing Assumptions

In 2016, an estimated 32,881 housing units were present in Gilliam, Hood River, Sherman, Wasco, and Klickitat counties, an increase of approximately 14 percent over 2008 levels. Housing vacancy rates in the analysis area average approximately 15 percent for these counties, slightly higher than the 9.5 percent rate described in 2008[59].

The findings in the Final Order on the ASC and subsequent amendments were based in part on the public service providers' representations of their ability to provide their respective services. In late July and early August 2018, the Certificate Holder contacted each of the public service providers listed in Exhibit U of the ASC and received confirmation that the Wasco County Police, the City of the Dalles Public Works, and the Dufur Volunteer Fire and Ambulance Service will continue to be able to provide the services listed to serve the facility[60, 61] (see Attachment 7).

The proposed amendment makes no changes to the Project structures or configuration, and there are no other circumstances that would alter the basis for Council's earlier determination. Accordingly, there is no change that would alter the basis of Council's prior findings, and Council may find that the proposed amendment meets OAR 345-022-0110.

[57] Final Order on the ASC, p. 126-127 (August 19, 2011)

[58] U.S. Census Bureau. 2017. Population data for Oregon and Washington states. Accessed at: https://factfinder.census.gov.

[59] U.S. Census Bureau. 2016. Oregon housing data. Accessed at: https://factfinder.census.gov.

[60] Email correspondence, City of The Dalles, Public Works (August 2, 2018)

[61] Email correspondence, Wasco County Sheriff (July 31, 2018)

5.1.14 Waste Minimization (OAR 345-022-0120)

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

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

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

(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.

(3) The Council may issue a site certificate for a special criteria facility under OAR 345-015-0310 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.

Response: Council previously found that the accumulation, storage, disposal, and transportation of waste generated by construction and operation of Summit Ridge are not likely to have an adverse impact on surrounding and adjacent areas[62]. Most waste will be removed from the site and reused, recycled, or disposed of at an appropriate facility. Water used on-site during construction for dust suppression and road compaction is expected to evaporate or infiltrate into the ground. Wastewater produced during operation will be discharged to an on-site septic system. Hazardous materials that could potentially be used on the Project site during construction or operation include lubricating oils, antifreeze, cleaners, and pesticides. Council adopted site certificate conditions to address the Waste Minimization Standard.[63]

The requested amendments would not impact the facility's ability to comply with existing site certificate conditions for waste management. This 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 from what was originally authorized. Therefore, Council may rely on its prior analysis to conclude that OAR 345-022020 is met.

[62] Final Order on the ASC, p. 146 (August 19, 2011)

[63] Final Order on Request for Contested Case, Amendment #2 and Request for Transfer of the Site Certificate, p. 147 (November 4, 2016)

5.2 Division 24 Standards

5.2.1 Public Health and Safety Standards for Wind Energy Facilities (OAR 345-024-0010)

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

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

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

Response: Council previously found that the Project complies with the Public Health and Safety Standards for Wind Energy Facilities.[64, 65] This finding was based on the conclusion that the Certificate Holder could design, construct, and operate the facility to preclude structural failure of the tower or blades that could endanger public safety, and to have adequate safety devices and testing procedures designed to warn of impending failure and to minimize the consequences of such failure. The requested amendments would not have any additional impact on compliance with the Public Health and Safety Standard for wind facilities.

The Certificate Holder has evaluated potential changes to type and location of nearest members of the public including potential new residences, roads, public/private airstrips/airports, and farm equipment operators. The results of this evaluation are provided below:

- New residences: As noted in Section 5.3.1, two potential residences have been identified outside the site boundary but within the 36-dBA noise contour that were not previously shown on Project maps. Field verification has not been conducted to confirm whether these structures are residences; however, the Certificate Holder has executed noise waivers with both landowners (Kortge Brothers and Bill/Barb Hammel). See Figure 10 for the locations of previously identified noise-sensitive receptors and the "worst-case" modeled 36-dBA noise contour along with potential noise-sensitive receptors identified during the 2018 aerial photo review.
- Roads: Based on an evaluation comparing Figure C-2 from the 2010 ASC to the latest Wasco County road maps and aerial photography, no new public road rights-of-way were identified within or adjacent to the site boundary since the original ASC was submitted in 2010. Note that a detailed analysis of setback distances to public road rights-of-way was

[64] Final Order on Request for Contested Case, Amendment #2 and Request for Transfer of the Site Certificate, p. 149 (November 4, 2016)

[65] Final Order on the ASC, p. 127 (August 19, 2011)

included in Amendment #2 as part of an administrative request to authorize a lesser setback for select turbines from the right-of-way of any dedicated road within the site boundary than is required by WCLUDO Section 19.030(D)(1)(c)(2). The administrative request was approved in the Final Order on Request for Contested Case, Amendment #2 and Transfer Request (EFSC 2016)[66].

- Public/private airports/airstrips: The closest public airports to the site boundary are the Columbia Gorge Regional/The Dalles Municipal Airport (over 10 miles from closest portion of site boundary) and the Wasco State Airport (over 12 miles from closest portion of site boundary). Both of these airports existed prior to the 2010 ASC submittal. According to the Oregon Department of Aviation, there are 11 private airport strips in Wasco County (DOA 2015) with the two closest being the Underhill and Lyda Ranch airstrips, both over 11 miles away and both in existence prior to 2010. Based on review of the Department of Aviation, no new airports or airstrips have been sited within or adjacent to the site boundary.[67]
- Farm equipment operators: To the best of the Certificate Holder's knowledge, farm operations within and adjacent to the site boundary have not substantially changed since the Council's previous evaluation.

The following safety measures will be implemented to ensure the public's safety:

- The Certificate Holder will design, construct, and operate the facility to preclude structural failure of the tower or blades that could endanger public safety, and will have adequate safety devices and testing procedures designed to warn of impending failure and to minimize the consequences of such failure.
- An operational safety monitoring program will be implemented that will require regular inspection of all turbine and turbine tower components.
- Turbine towers will have no exterior ladders or access to the turbine blades, and tower access doors will be locked at all times except when authorized personnel are present.

To protect the public from electrical hazards, the Certificate Holder will enclose the facility substation with appropriate fencing and locked gates.

There have been no changes to circumstances or factors considered in the previous evaluation, including structural soundness of tower and blades. The Certificate Holder can continue to comply with all Site Certificate conditions, including those specific to public health and safety (Conditions 7.1 through 7.13). Condition 7.5 requires implementation of an operational safety monitoring program including regular inspections, and Condition 7.6 requires that self-monitoring devices and automatic protection equipment be installed on each turbine.

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[66] EFSC (Energy Facilities Siting Council). 2016. __Final Order on Request for Contested Case, Amendment #2 and Request for Transfer of the Site Certificate. Summit Ridge Wind Farm. November 4._ Available online at: https://www.oregon.gov/energy/facilities-safety/facilities/Facilities%20library/SRW-AMD2-final-order-110416.pdf.__

[67] DOA (Department of Aviation). 2015. __Oregon Private Use Airports by County, 2015. Available online at https://www.oregon.gov/aviation/docs/Private_Airports_By_County_2015.pdf.___

Each wind turbine can be controlled remotely and locally via a Supervisory Control and Data Acquisition System (SCADA). This system offers remote control and a variety of status views and useful reports from a standard internet web browser. The status views present information including electrical and mechanical data, operation and faults status, meteorological data, and grid station data.

In addition, each wind turbine is equipped with a unique conditions monitoring setup. This system monitors the vibration level of the main components and compares the actual vibration spectra with a set of established reference spectra. Results review, detailed analysis, and reprogramming can all be carried out using a standard web browser. Concerning the operating systems, each wind turbine operates automatically. It is self-starting when the wind speed reaches the cut-in wind speed. The output increases according to the power curve until the wind reaches nominal wind speed. The wind turbine continues to produce power until the wind turbine reaches the cut-out wind speed. If the average wind speed exceeds the maximum operational limit, the wind turbine is shut down automatically by pitching the blade's speed (i.e., rotating the blade angle out of the wind to ensure the turbine does not exceed its maximum rotational speed). When the average wind speed drops back below the restart average, the system resets automatically.

This request does not seek to enlarge the existing site boundary or change the physical components of the Project. There is no change to the previously approved maximum number of turbines, maximum generating capacity, or infrastructure locations from what was originally authorized. The total number of turbines at the Project will not exceed 72 and the generation capacity will not exceed 194.4 MW. The proposed amendment makes no changes that would alter the basis for Council's earlier findings, and therefore, OAR 345-024-0010 is met.

5.2.2 Cumulative Effects Standards 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.

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

Response: Council previously found that the Project complies with the Siting Standards for Wind Energy Facilities.[68, 69] Specifically, in approving the original ASC, the Council considered and made findings regarding cumulative impacts of the facility related to 1) roads, 2) transmission lines and substations, 3) wildlife protection, 4) visual features, and 5) lighting. As approved, the Certificate Holder is required to use existing county roads to gain access to the site.[70] The power collection system is limited to no more than 5 miles of overhead line.[71] The facility is required to be designed to adhere to the 2006 Avian Powerline Interaction Committee's suggested practices for raptor protection on power lines and provide mitigation according to ODFW's habitat mitigation guidelines.[72] The wind turbine towers must be coated with neutral gray, white, or off-white tones to blend in with the surrounding landscape.[73] The turbines are required to have only the minimum lighting required by the FAA, and the substation and O&M facilities are required to have lighting that is shielded or directed downward.[74]

The current requested extension to the construction start and completion deadlines do not impact the cumulative environmental effects of the components authorized for construction or otherwise change the facts upon which the Council relied in making findings for this standard regarding the cumulative environmental effects from this wind energy facility.

This request does not seek to enlarge the existing site boundary or change the physical components of the Project. There is no change to the previously approved maximum number of turbines, maximum generating capacity, or infrastructure locations from what was originally authorized. The total number of turbines at the Project will not exceed 72 and the generation capacity will not exceed 194.4 MW. The proposed amendment makes no changes that would alter the basis for Council's earlier findings, and therefore, the proposed amendment request satisfies OAR 345-024-0015.

[68] Final Order on Request for Contested Case, Amendment #2 and Request for Transfer of the Site Certificate, p. 151 (November 4, 2016)

[69] Final Order on the ASC, p. 130 (August 19, 2011)

[70] Final Order on the ASC, p. 128 (August 19, 2011)

[71] Final Order on the ASC, p. 128 (August 19, 2011)

[72] Final Order on the ASC, p. 129 (August 19, 2011)

[73] Final Order on the ASC, p. 129 (August 19, 2011)

[74] Final Order on the ASC, p. 129 (August 19, 2011)

5.2.3 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.

Response: Council previously found that the Project complies with the transmission lines standard.[75, 76] This finding was based on construction of underground and aboveground 34.5-kV collector lines and one approximately 8-mile segment of aboveground 230-kV transmission line. The electric field for aboveground lines was calculated using BPA's Corona and Field Effect Program and determined to be between 0.5 kV per meter (34.5-kV lines) and 3.6 kV per meter, both well below the statutory limit of not more than 9 kV per meter at 1 meter above the ground surface. The assumptions used to reach this conclusion are not altered by the extension to construction deadlines.

Induced currents were evaluated and determined to be as low as reasonably achievable given Conditions IV.M.2.2 and IV.M.2.3, which require the Certificate Holder to develop, implement, and maintain an electrical protection plan to prevent hazards from induced voltage.

The proposed amendment does not propose changes to the previously approved transmission system. Therefore, Council may rely on its earlier findings when concluding that the amendment meets OAR 345-024-0090.

5.3 Other Applicable Regulatory Requirements

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 ground water.

[75] Final Order on Request for Contested Case, Amendment #2 and Request for Transfer of the Site Certificate, p. 154 (November 4, 2016)

[76] Final Order on the ASC, p. 132 (August 19, 2011)

5.3.1 Noise Control Regulations: OAR 340-035-0035

(1) Standards and Regulations:

*****

(a) New Noise Sources:

(A) New Sources Located on Previously Used Sites. No person owning or controlling a new industrial or commercial noise source located on a previously used industrial or commercial site shall cause or permit the operation of that noise source if the statistical noise levels generated by that new source and measured at an appropriate measurement point, specified in subsection (3)(b) of this rule, exceed the levels specified in Table 8, except as otherwise provided in these rules. For noise levels generated by a wind energy facility including wind turbines of any size and any associated equipment or machinery, subparagraph (1)(b)(B)(iii) applies.

****

Council previously found that, subject to Conditions 12.1 and 12.2 of the site certificate, the Project satisfies the Noise Standard.[77] Condition 12.1 addresses measures to reduce construction noise impacts at nearby residences, and Condition 12.2 requires preparation of an updated noise analysis based on final design and turbine specifications, along with provision of legally executed noise waivers where needed.

Based on a detailed review of aerial photos, two potential residences have been identified within the 36-dBA noise contour that were not previously shown on Project maps. Field verification has not been conducted to confirm whether these structures are occupied residences. However, landowners for both structures are project participants (Kortge Brothers and Bill/Barb Hammel). See Figure 10 for the locations of previously identified noise-sensitive receptors and the "worst-case" modeled 36-dBA noise contour along with potential noise-sensitive receptors identified during this 2018 aerial photo review. A list of property owners for the indicated residences is provided in Attachment 2.

The proposed modifications to construction start and completion deadlines do not alter the basis for Council's prior findings, and therefore, the Project satisfies the Noise Standard.

5.3.2 Removal-Fill: OAR 141-085-0005 through 141-085-0090

The Oregon Removal-Fill Law (ORS 196.800 through .900) requires a Removal-Fill permit if 50 cubic yards or more of material is removed, filled, or altered within any "waters of the state" at the Project site. Summit Ridge intends to avoid all impacts to identified wetlands and waterways, and therefore, the Project will not require a Removal-Fill permit. The proposed extension to

[77] Final Order on Amendment #2, p. 155.

construction start and completion deadlines will not alter the Project's ability to avoid wetlands and waterways, and therefore, no state Removal-Fill permit will be required.

5.3.3 Water Rights

Under ORS Chapters 537 and 540 and OAR Chapter 690, the Oregon Water Resources Department (OWRD) administers water rights for appropriate use of the water resources of the state. The Council previously found that the facility would comply with the Ground Water Act of 1955 and the rules of OWRD.[78] The proposed extension to construction and completion deadlines does not alter Summit Ridge's ability to obtain water from the City of The Dalles during construction (see Attachment 7) or its intended use of less than 5,000 gallons per day of water from an on-site well during operations. Therefore, Council may rely on its prior findings that the Project complies with the Ground Water Act of 1955 and the rules of OWRD.

6.0 Property Owners Located within or Adjacent to the Site of the Facility (OAR 345-027-0060(1)(f))

(f) An updated list of the owners of property located within or adjacent to the site of the facility, as described in OAR 345-021-0010(1)(f).

Response: An updated property owner list and tax lot map required by OAR 345-027-0060(1)(f) is provided as Attachment 2.

7.0 Conclusion

In sum, the extension request demonstrates that the proposed extensions to the construction start and completion deadlines comply with the applicable standards and will not violate any other Council standards or Site Certificate conditions. Summit Ridge therefore requests that the Council approve this request and make the requested changes to the Site Certificate for the Project.

[78] Final Order on the ASC, p. 160; Final Order on Amendment #2, p. 157

Figures

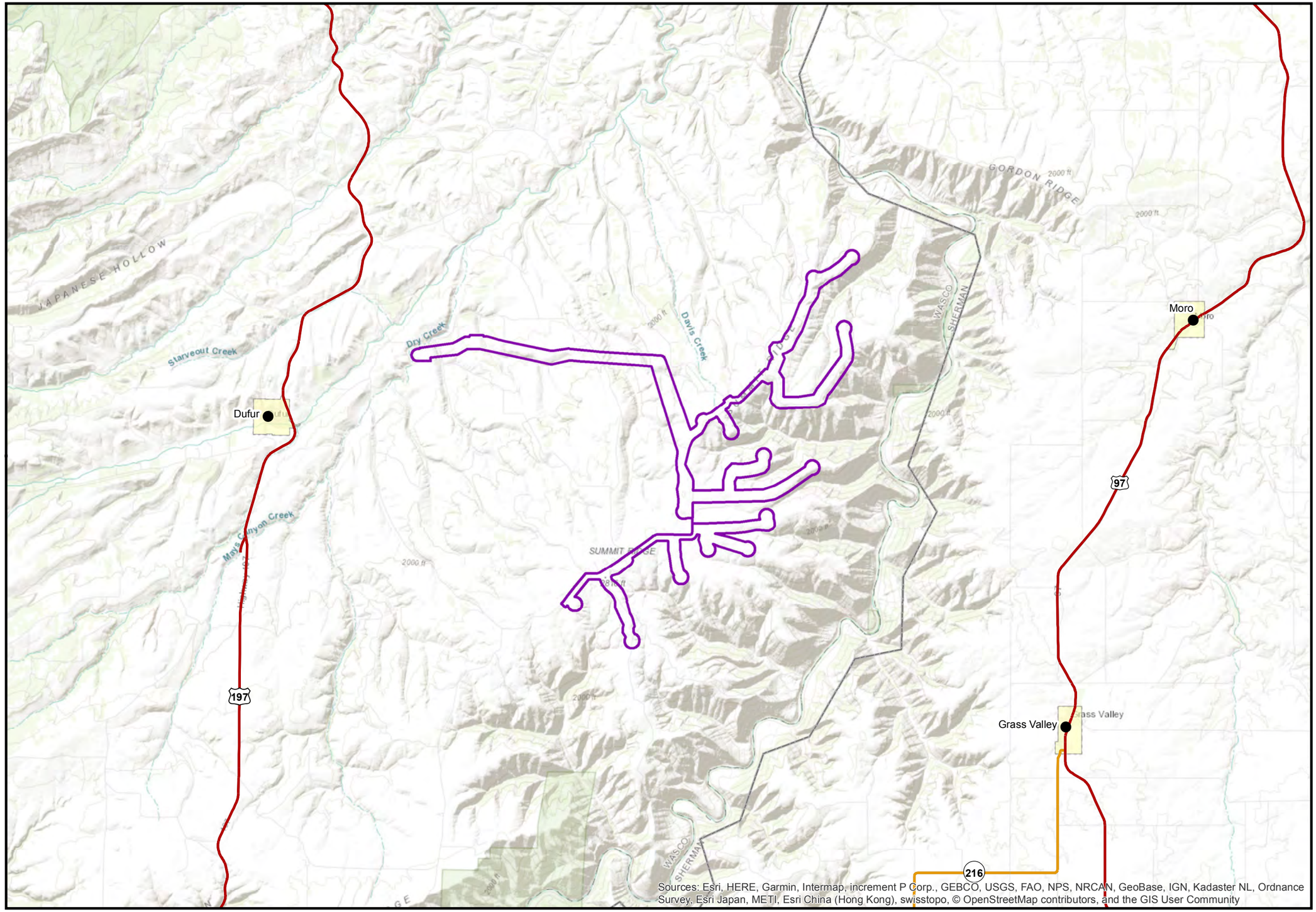
Figures

Figure 1

PATTERN ENERGY
Summit Ridge

Project Vicinity

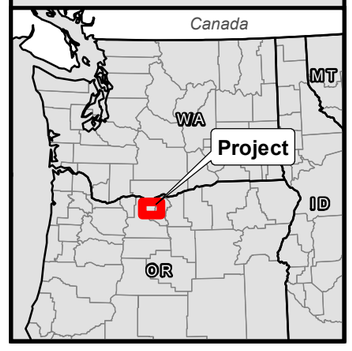
Wasco County, OR
November 2018



- Site Boundary
- City/Town
- Interstate Highway
- US Highway
- State Highway
- County Boundary

Pattern Development

TETRA TECH



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Data Sources ESRI 2007: roads, hydrography / USDA NAIP 2010: air photo / Pattern Energy : project infrastructure

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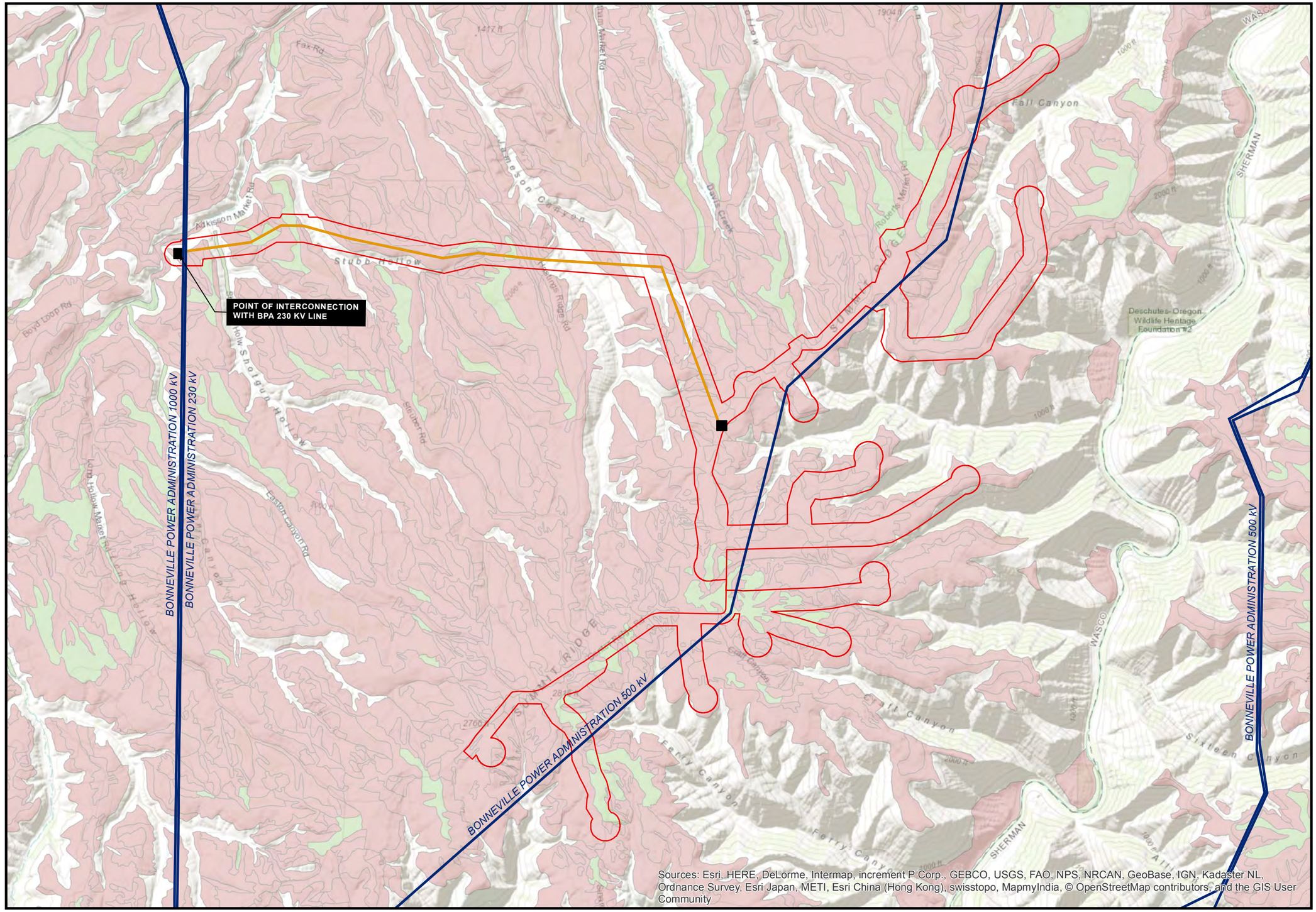

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0 1 2 3 4 Miles

Data Sources ESRI 2007: roads, hydrography / USDA NAIP 2010: air photo / Pattern Energy : project infrastructure

Figure 2

PATTERN ENERGY

Summit Ridge

High-Value Farmland Soils and Arable Soils

Wasco County, OR
October 2018

- Proposed Substation
- Transmission Route from substation to BPA 87WTG
- Existing Electric Transmission Line
- Site Boundary
- High-value Farmland Soils
- Arable Soils

Pattern Development

TETRA TECH

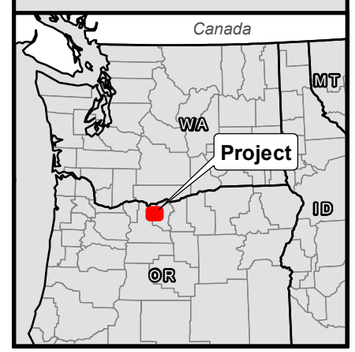

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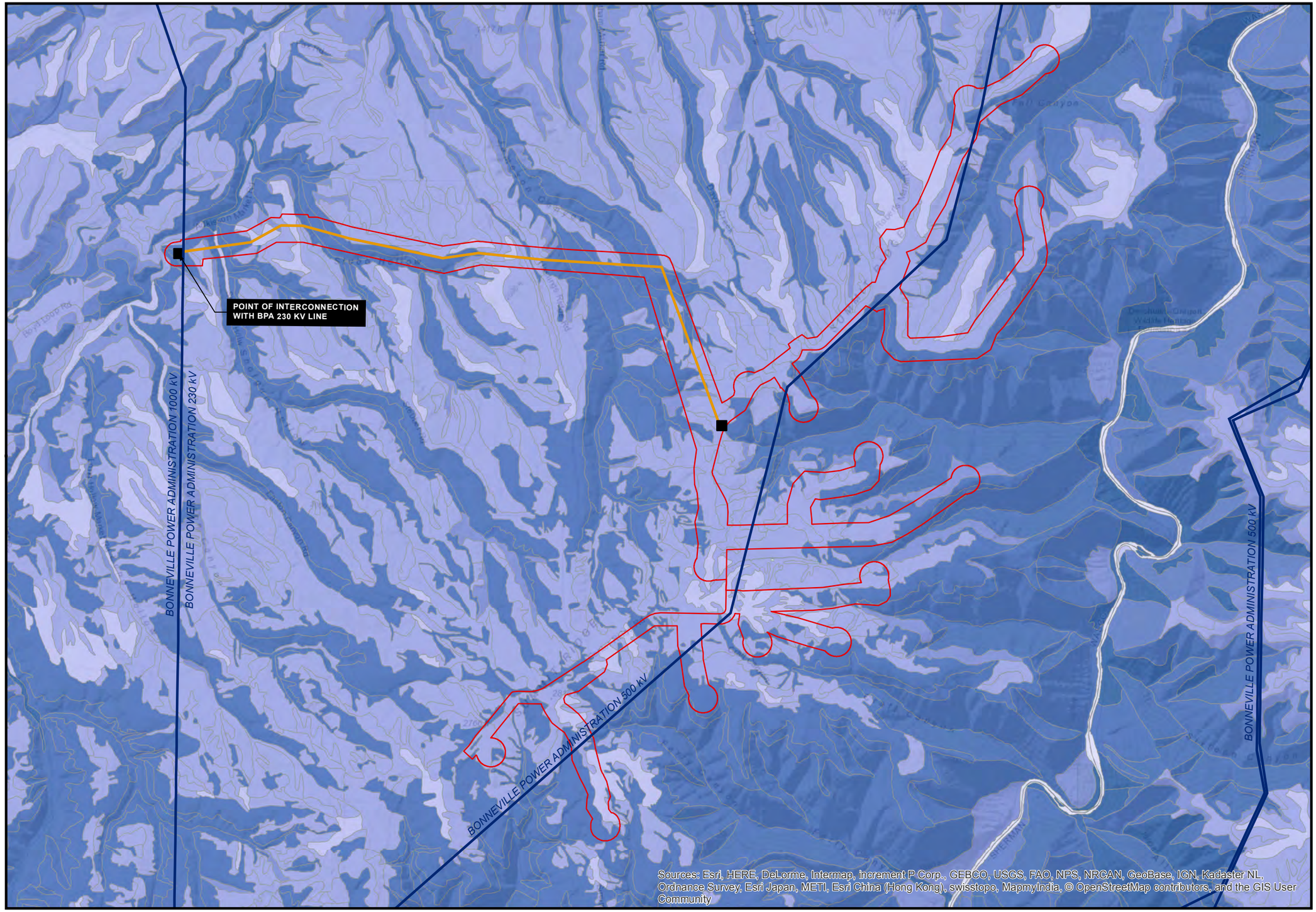
Figure 3

PATTERN ENERGY
Summit Ridge

NRCS Soil Classifications

Wasco County, OR
October 2018



Proposed Substation
Transmission Route from substation to BPA 87WTG
Existing Electric Transmission Line
Site Boundary

NRCS Capability Class

- Unclassified
- Class 2
- Class 3
- Class 4
- Class 6
- Class 7
- Class 8

Pattern Development

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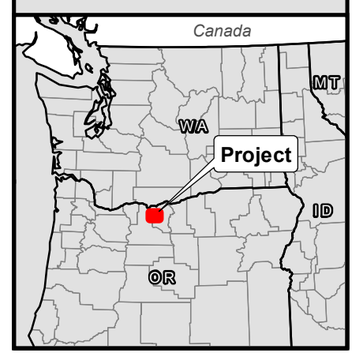

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Data Sources ESRI 2007: roads, hydrography / USDA NAIP 2010: air photo / Pattern Energy : project infrastructure

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Figure 4

PATTERN ENERGY

Summit Ridge

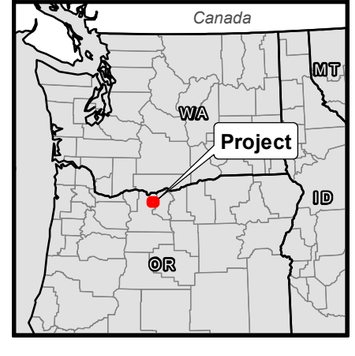
Cultivated Lands Near Transmission Route

Wasco County, OR
October 2018

- Proposed Substation
- Transmission Route from substation to BPA 87WTG
- Existing Electric Transmission Line
- Site Boundary
- Dryland Wheat Crops Delineated During 2009 Habitat Surveys

Pattern Development

TETRA TECH



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Data Sources ESRI 2007: roads, hydrography / USDA NAIP 2010: air photo / Pattern Energy : project infrastructure

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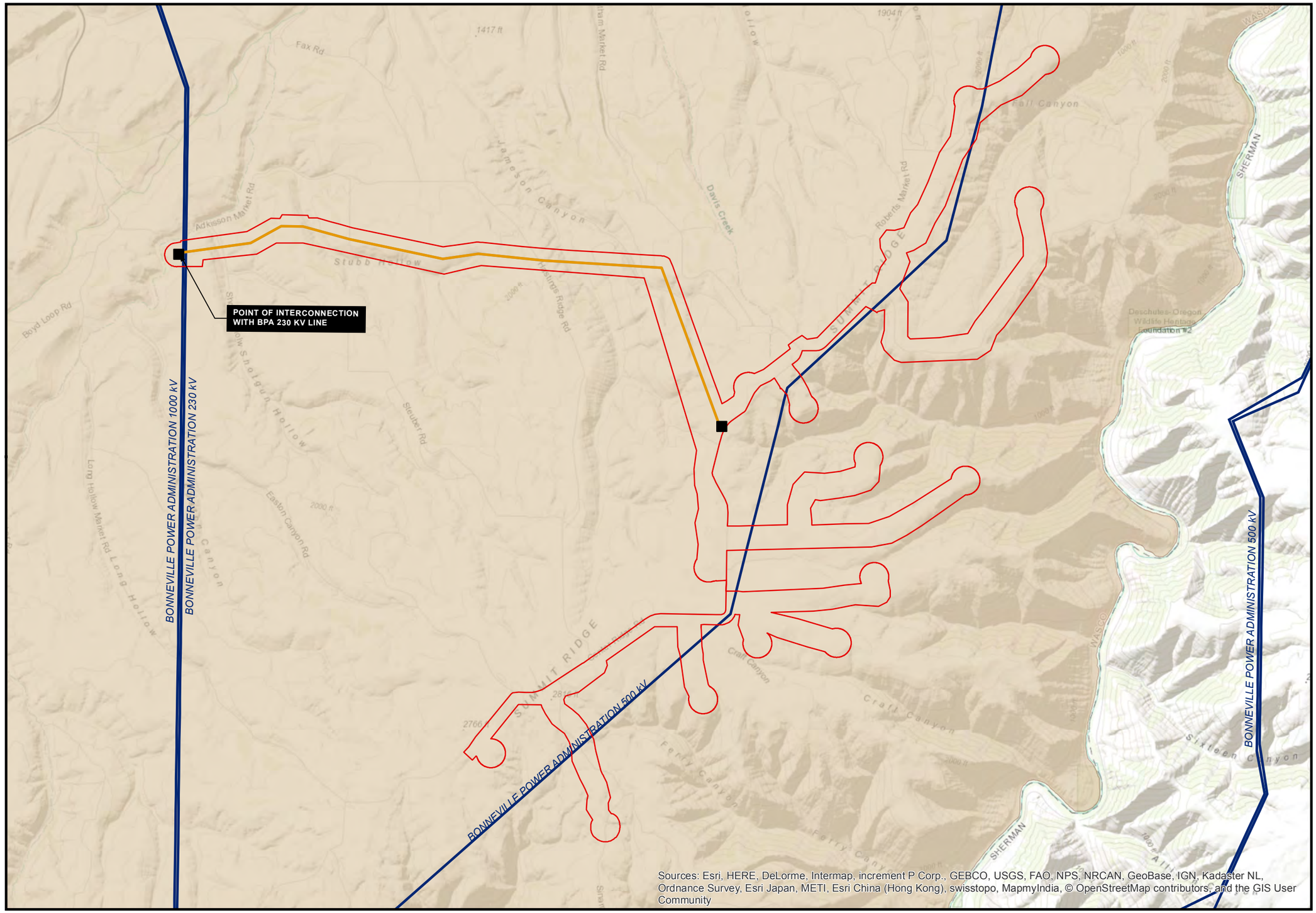


Figure 5

PATTERN ENERGY
Summit Ridge

Zoning Map

Wasco County, OR
October 2018

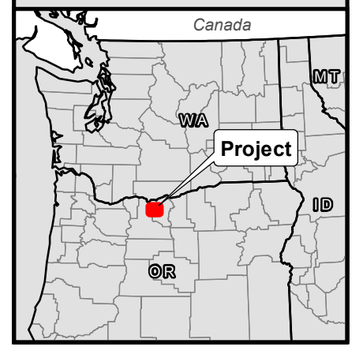
- Existing Electric Transmission Line
- Proposed Substation
- Site Boundary
- Transmission Route from substation to BPA 87WTG

Wasco County Zoning

- A-1 (160)

Pattern Development

TETRA TECH



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Data Sources ESRI 2007: roads, hydrography / USDA NAIP 2010: air photo / Pattern Energy : project infrastructure

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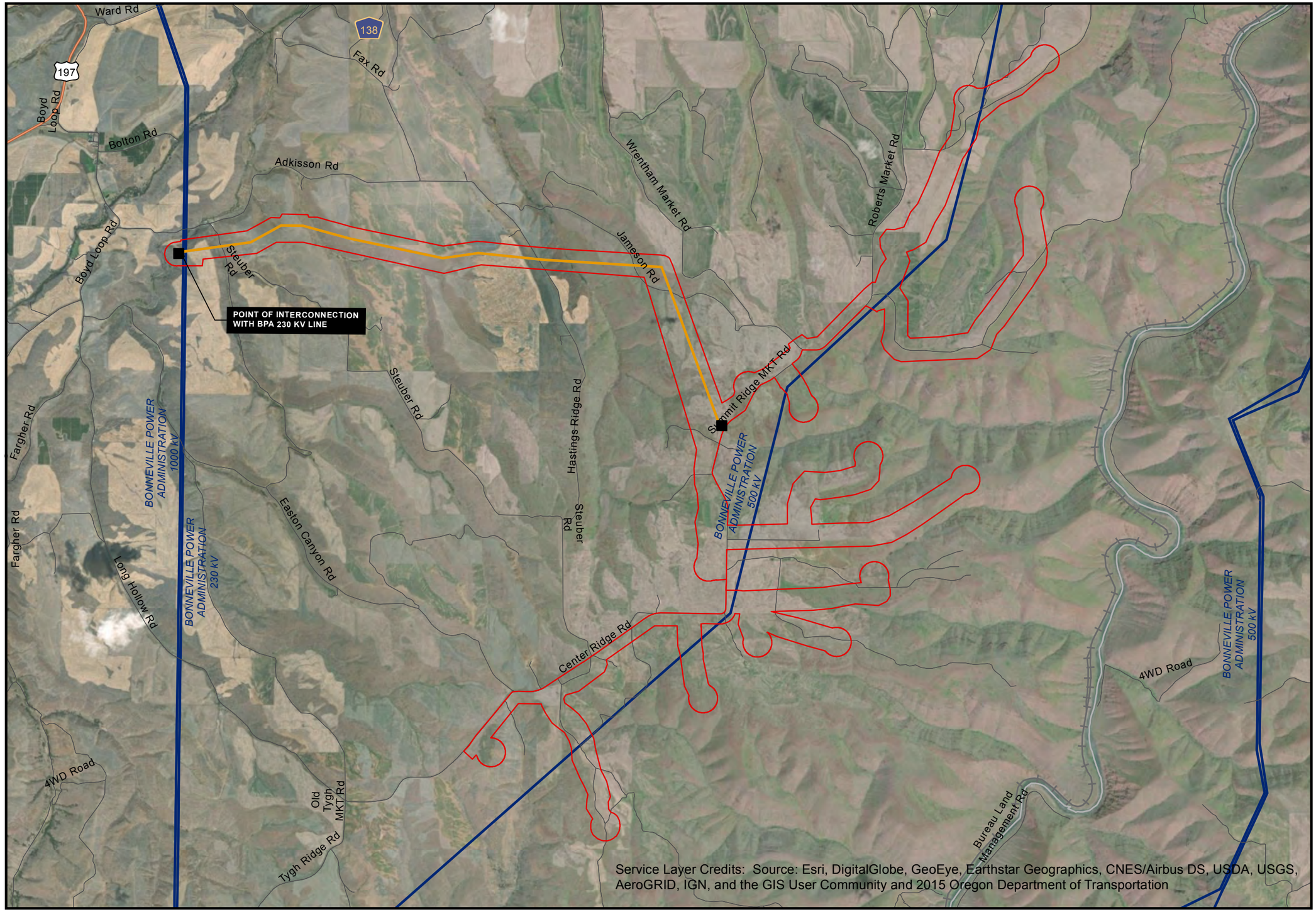

Figure 6

PATTERN ENERGY
Summit Ridge

Existing Rights of Way

Wasco County, OR
October 2018

- Proposed Substation
- Transmission Route from substation to BPA 87WTG
- Site Boundary
- Existing Electric Transmission Line
- Major Highways
- Highways
- Major Roads
- Local Streets
- Railroad
- County Boundary

Pattern Development

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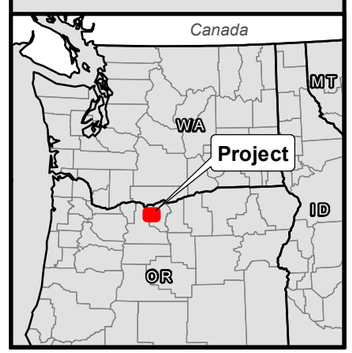

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Data Sources ESRI 2007: roads, hydrography / USDA NAIP 2010: air photo / Pattern Energy : project infrastructure

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Figure 7

PATTERN ENERGY
Summit Ridge
Habitat Categorization Overview Map

Wasco County, OR
October 2018

Map Tile 1

Map Tile 2

Map Tile 3

Map Tile 4

Map Tile 5

- Transmission Route from substation to BPA 87WTG
- Site Boundary

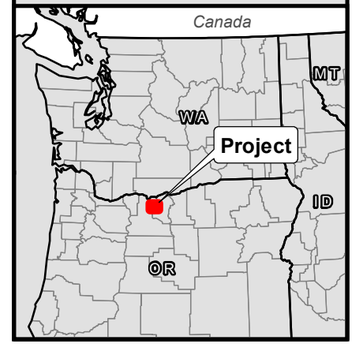
Habitat Type

- 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).

Pattern Development

TETRA TECH



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Data Sources ESRI 2007: roads, hydrography / USDA NAIP 2010: air photo / Pattern Energy : project infrastructure

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Figure 7

PATTERN ENERGY
Summit Ridge

Habitat Categorization
Map Tile 1

Wasco County, OR

October 2018

Transmission Route from substation to BPA 87WTG

Site Boundary

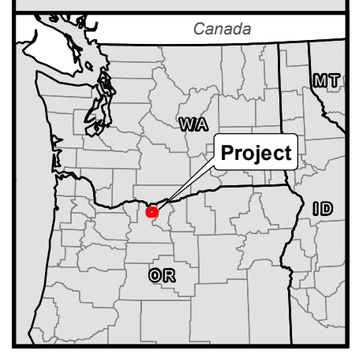
Habitat Type*

- Big Sagebrush Shrub-steppe
- Dryland Wheat or Other Small Grain
- Escarpment
- Exotic Annual Grassland
- Farmyard or Residence
- Old Field
- Rabbitbrush/Buckwheat Shrub-steppe
- Revegetated Grassland
- Riparian Shrublands/Woodland
- Riparian Woodland
- Road

*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).

Pattern Development

TETRA TECH



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Data Sources ESRI 2007: roads, hydrography / USDA NAIP 2010: air photo / Pattern Energy : project infrastructure

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Figure 7

PATTERN ENERGY
Summit Ridge

Habitat Categorization
Map Tile 2
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
- Quarry
- Rabbitbrush/Buckwheat Shrub-steppe
- Revegetated Grassland
- Riparian Shrublands/Woodland
- Riparian Woodland
- Road
- Talus

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Pattern Development

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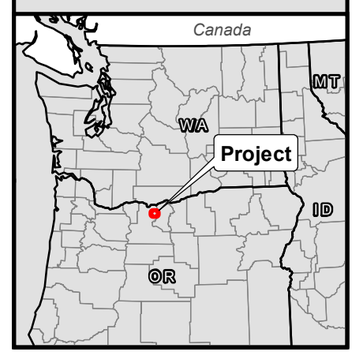

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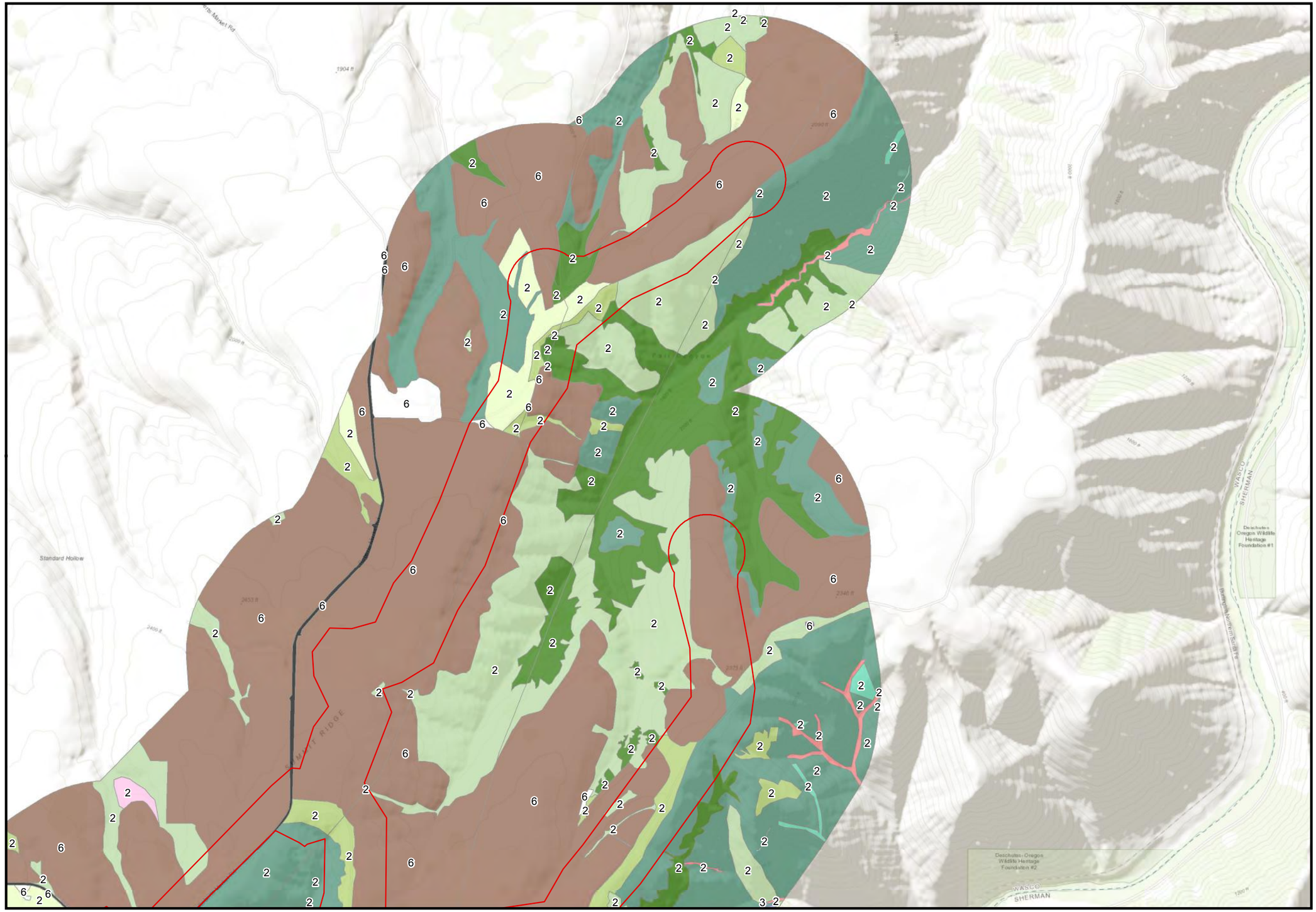


Figure 7

PATTERN ENERGY
Summit Ridge

Habitat Categorization
Map Tile 3

Wasco County, OR

October 2018

- Transmission Route from substation to BPA 87WTG
- Site Boundary

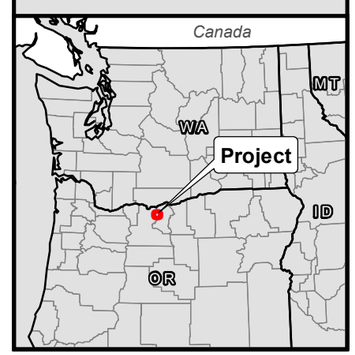
Habitat Type*

- Big Sagebrush Shrub-steppe
- Dryland Wheat or Other Small Grain
- Escarpment
- Exotic Annual Grassland
- Farmyard or Residence
- Native Perennial Grassland
- Old Field
- Quarry
- Rabbitbrush/Buckwheat Shrub-steppe
- Revegetated Grassland
- Riparian Shrublands/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).

Pattern Development

TETRA TECH



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Data Sources ESRI 2007: roads, hydrography / USDA NAIP 2010: air photo / Pattern Energy : project infrastructure

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Figure 7

PATTERN ENERGY
Summit Ridge

Habitat Categorization
Map Tile 4

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).

Pattern Development

TETRA TECH

1:24,000 WGS84 UTM 10

0 2,000 4,000 6,000 Feet

Data Sources ESRI 2007: roads, hydrography / USDA NAIP 2010: air photo / Pattern Energy : project infrastructure

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Figure 7

PATTERN ENERGY
Summit Ridge

Habitat Categorization
Map Tile 5

Wasco County, OR

October 2018

Transmission Route from substation to BPA 87WTG

Site Boundary

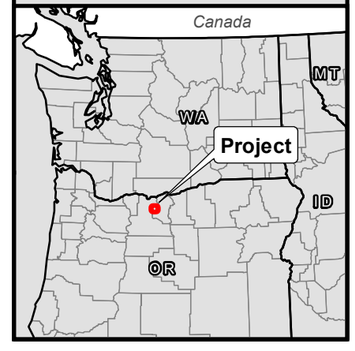
Habitat Type*

- Big Sagebrush Shrub-steppe
- Dryland Wheat or Other Small Grain
- Escarpment
- Exotic Annual Grassland
- Farmyard or Residence
- Native Perennial Grassland
- Old Field
- Pond
- Rabbitbrush/Buckwheat Shrub-steppe
- Revegetated Grassland
- Riparian Shrublands/Woodland
- Riparian Woodland
- Road

*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).

Pattern Development

TETRA TECH



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Data Sources ESRI 2007: roads, hydrography / USDA NAIP 2010: air photo / Pattern Energy : project infrastructure

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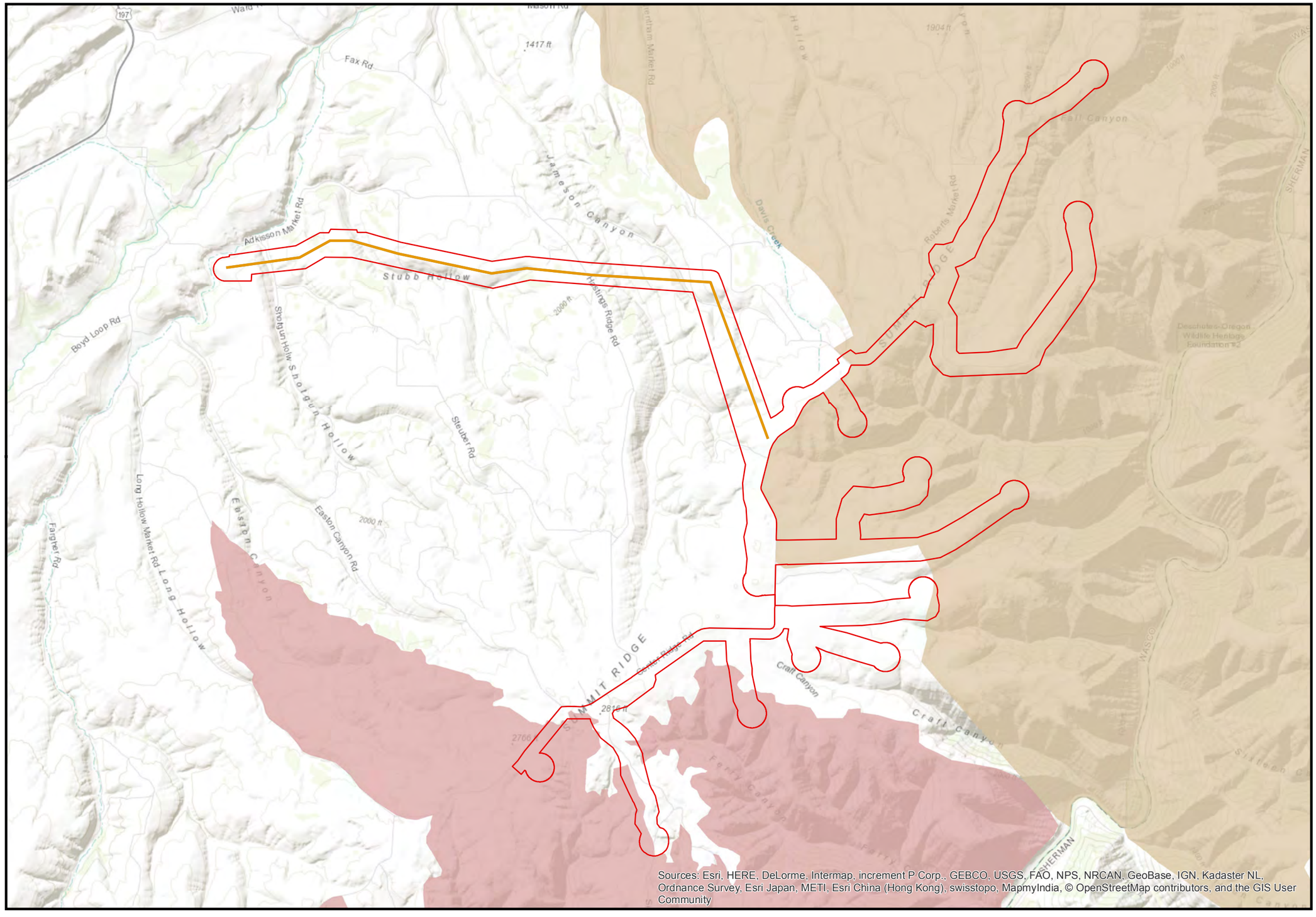

Figure 8

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

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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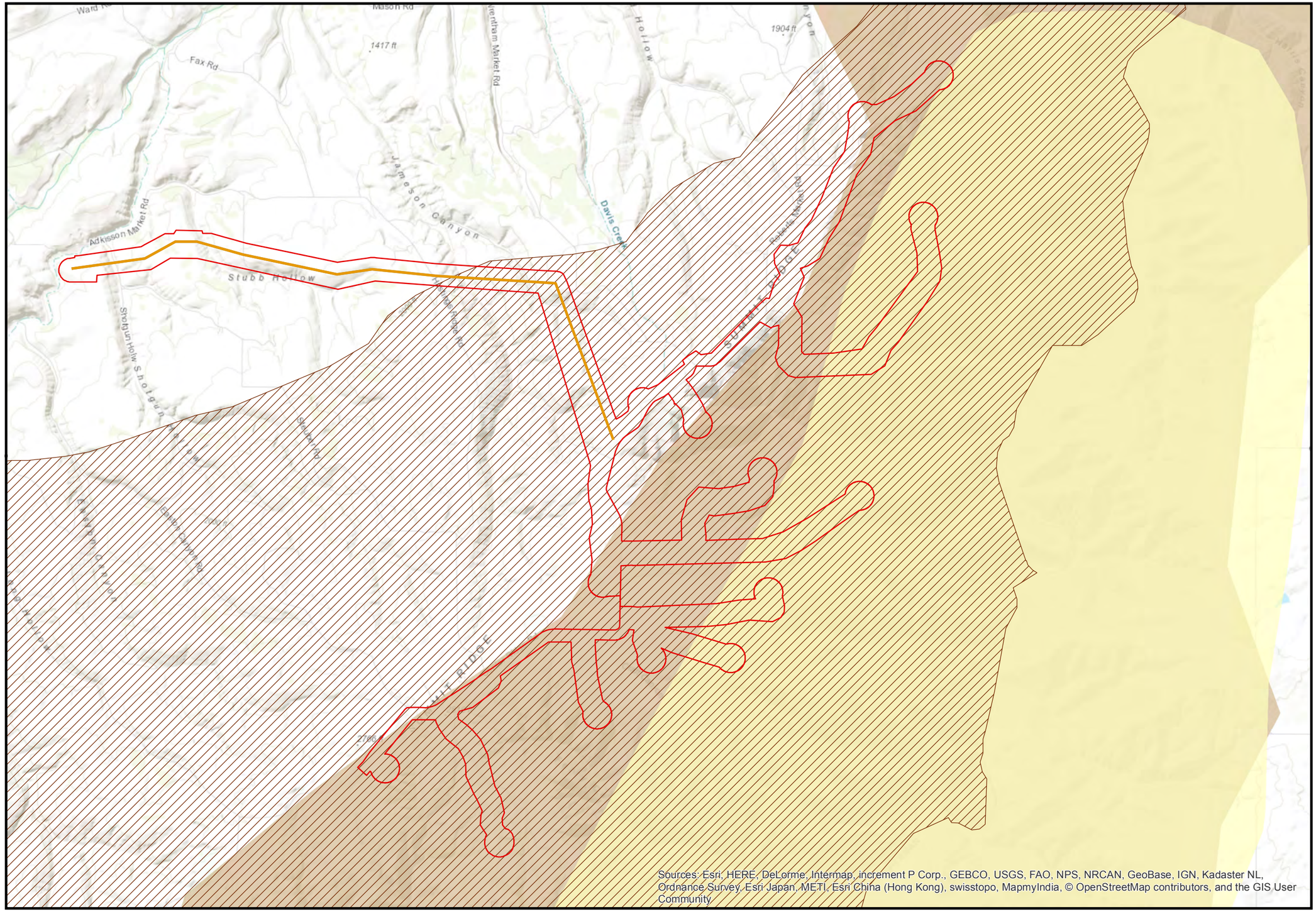


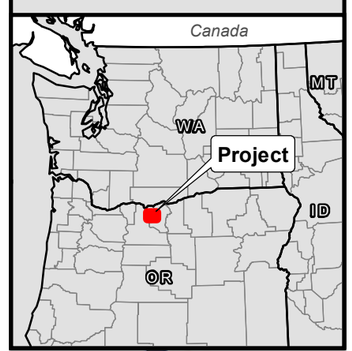
Figure 9

PATTERN ENERGY
Summit Ridge

Big Game Winter Range

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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0 1 2 3 4 5 Miles

Data Sources ESRI 2007: roads, hydrography / USDA NAIP 2010: air photo / Pattern Energy : project infrastructure

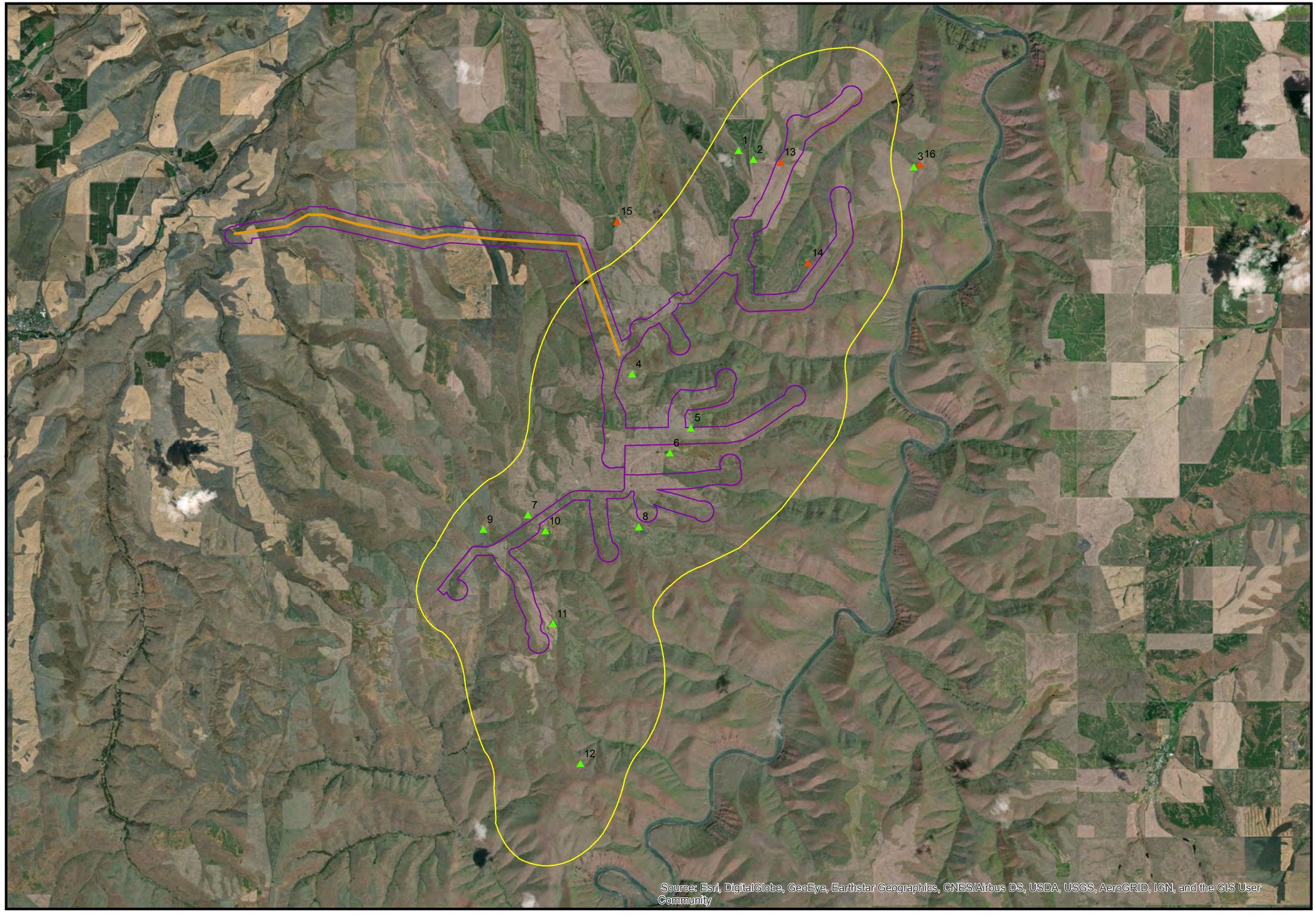
Z:\UtilServ\Summit_Ridge\MXDs\Fig9_Big_Game.mxd - Last Saved 10/18/2018

Figure 10

PATTERN ENERGY
Summit Ridge

Noise Receptors

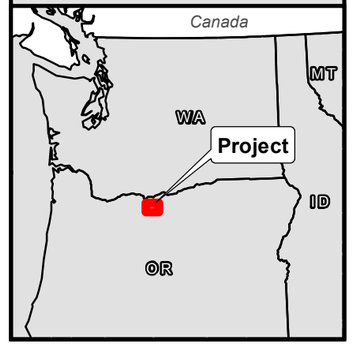
Wasco County, WA
October 2018



- Receptor
- New Receptor
- 36-dBA Noise Contour (Vestas V100)
- Remodified Transmission Route from substation to BPA 87WTG
- Site Boundary

Pattern Development

TETRA TECH



1:88,980 WGS84 UTM 10

0 1 2 3 4 5 Miles

Data Sources ESRI 2007: roads, hydrography / USDA NAIP 2010: air photo / Pattern Energy : project infrastructure

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Attachment 1. Redlined Existing Site Certificate

SRWAMD3Doc12-1

THIRD AMENDED SITE CERTIFICATE

FOR THE

SUMMIT RIDGE WIND FARM

Issued December 2017
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

SUMMIT RIDGE WIND FARM SITE CERTIFICATE
TABLE OF CONTENTS

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 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 3, (3) the Final Order on Amendment 2, (4) the Amended Final Order on Amendment 1, and (5) 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. 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.

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

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

2.0. SITE CERTIFICATION

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

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

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

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

2.5. Subject to the conditions herein, this site certificate binds the State and all counties, cities, and political subdivisions in Oregon as to the approval of the site and the construction, operation, and retirement of the facility as to matters that are addressed in and governed by this site certificate.
[ORS 469.401(3)]

2.6. Each affected state agency, county, city, and political subdivision in Oregon with authority to issue a permit, license, or other approval addressed in or governed by this site certificate shall, upon submission of the proper application and payment of the proper fees, but without hearings or other proceedings, issue such permit, license, or other approval subject only to conditions set forth in this site certificate.

[ORS 469.401(3)]

2.7. After issuance of this site certificate, each state agency or local government agency that issues a permit, license, or other approval for the facility shall continue to exercise enforcement authority over such permit, license, or other approval.
[ORS 469.401(3)]

2.8. After issuance of this site certificate, the Council shall have continuing authority over the site and may inspect, or direct the Oregon Department of Energy (Department) to inspect, or request another state agency or local government to inspect, the site at any time in order to ensure that the facility is being operated consistently with the terms and conditions of this site certificate.
[ORS 469.430]

2.9. 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 on Amendment 2] [Mandatory Condition OAR 345-025-0006 (3)]

2.10. Before any transfer of ownership of the facility or ownership of the site certificate holder, the certificate holder shall inform the Department of the proposed new owners. The requirements of OAR 345-027-0100 apply to any transfer of ownership that requires a transfer of the site certificate.
[Final Order IV.B.2.8] [Mandatory Condition OAR 345-025-0006 (15)]

2.11. Any matter of non-compliance under the site certificate shall be the responsibility of the certificate holder. Any notice of violation issued under the site certificate shall be issued to the certificate holder. Any civil penalties assessed under the site certificate shall be levied on the certificate holder.
[Final Order IV.B.2.5]

2.12. Within 72 hours after discovery of conditions or circumstances that may violate the terms or conditions of the site certificate, the certificate holder shall report the conditions or circumstances to the Department.
[Final Order IV.B.2.7]

2.13. The Council shall not change the conditions of this site certificate except as provided for in OAR Chapter 345, Division 27.
[Final Order VII.1] [Mandatory Condition OAR 345-025-0006 (1)]

2.14. Following the completion of surveys required by this site certificate, the Department will present the results of those surveys and required consultations at the next regularly scheduled Council meeting.
[Added at the August 7, 2015 Energy Facility Siting Council Meeting]

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 Summit Ridge turbines will be located within micrositing corridors approximately 1,300 feet wide.

THE ENERGY FACILITY

Summit Ridge has a combined peak generating capacity of 194.4 megawatts (MW). The facility 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*:

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

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 or any successor rule in effect at the time the request for extension is submitted.
[Final Order on Amendment 2] [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 or any successor rule in effect at the time the request for extension is submitted.
[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 and transmission line within the corridor locations set forth in Exhibit C of the application for site certificate, subject to the conditions of this site certificate.
[Final Order III.D.8] [Mandatory Condition OAR 345-025-0006 (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.
c. The turbine hub height must not exceed 91 meters and the maximum blade tip height must not exceed 152 meters above grade.
d. The minimum blade tip clearance must be 18 meters above ground.
[Final Order on Amendment 2] [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 #2*] 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 Amendment #2] [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)]

5.8. Before beginning construction, the certificate holder shall conduct a site-specific

geotechnical investigation and shall report its findings to the Oregon Department of Geology & Mineral Industries (DOGAMI) and the Department. The certificate holder shall conduct the geotechnical investigation after consultation with DOGAMI and in general accordance with DOGAMI open file report 00-04 "Guidelines for Engineering Geologic Reports and Site-Specific Seismic Hazard Reports."
[Final Order V.A.2.1]

5.9. Before beginning construction of any new State Highway approaches or utility crossings, the certificate holder shall obtain all required permits from the Oregon Department of Transportation (ODOT) subject to the applicable conditions required by OAR Chapter 734, Divisions 51 and 55. The certificate holder shall submit the necessary application or applications in a form satisfactory to ODOT and the Department for the location, construction and maintenance of approaches to State Highway 197 for access to the site. The certificate holder shall submit the necessary application or applications in a form satisfactory to ODOT and the Department for the location, construction and maintenance of collector cables or transmission lines crossing Highway 197.
[Final Order V.C.2.12]

5.10. Before beginning construction, the certificate holder shall notify the Department in advance of any work on the site that does not meet the definition of "construction" in ORS 469.300 (excluding surveying, exploration, or other activities to define or characterize the site) and shall provide to the Department a description of the work and evidence that its value is less than $250,000.
[Final Order IV.B.2.6]

5.11. Prior to the beginning of construction a Road Impact Assessment/Geotechnical Report for roads to be used by the project shall be submitted to the Department and Wasco County. Said report should include an analysis of project-related traffic routes to be used during phases of construction, project operation and decommissioning. These reports shall be incorporated into a Road Use Agreement with the County.
[Amended Final Order on Amendment 1 V.C.2.17]

5.12. Prior to beginning construction of new access roads, the certificate holder shall obtain any Road Approach Permit(s) that may be required by the Wasco County Public Works Department.
[Final Order on Amendment 2]

5.13. Prior to beginning construction, the certificate holder shall obtain any Utility Permit(s) that may be required by the Wasco County Public Works Department.
[Final Order on Amendment 2]

5.14. Before beginning construction, the certificate holder shall provide to the Department

evidence demonstrating that the certificate holder has obtained a guarantee from the turbine manufacturer for those turbines located within one mile of the boundaries of the Deschutes Federal Wild and Scenic River and the Deschutes State Scenic Waterway that the maximum sound power of those turbines would not exceed 109 dBA plus 2 dB uncertainty when measured according to IEC (International Electrotechnical Commission) 61400-11:2002 ed. 2. No turbine shall be located closer than 0.72 miles from any protected area.

6.0. DESIGN, CONSTRUCTION, AND OPERATIONS

6.1. The certificate holder shall:

a. Prior to construction, notify the Department of the identity, telephone number, e-mail address and qualifications of the full-time, on-site construction manager. Qualifications shall demonstrate that the construction manager has experience in managing permit and regulatory compliance requirements and is qualified to manage a wind facility construction project.

b. Prior to operation, notify the Department of the identity, telephone number, e-mail address and qualifications of the full-time, on-site operations manager. Qualifications shall demonstrate that the operations manager has experience in managing permit and regulatory compliance requirements and is qualified to manage operation of a wind facility.

c. Prior to facility retirement, notify the Department of the identity, telephone number, e-mail address and qualifications of the personnel or entity responsible for facility decommissioning and restoration activities. Qualifications shall demonstrate that the identified personnel have experience in managing permit and regulatory compliance requirements and are qualified to decommission a wind facility.

The certificate holder shall notify the Department within 72-hours upon any change in personnel or contact information provided to satisfy Condition 6.1(a) through (c).
[Final Order on Amendment 3]

6.2. The certificate holder shall provide portable toilets for on-site sewage handling during construction and shall ensure that they are pumped and cleaned regularly by a licensed contractor who is qualified to pump and clean portable toilet facilities.
[Final Order V.C.2.1]

6.3. The certificate holder shall implement a waste management plan during construction that includes but is not limited to the following measures:

a. Recycling steel and other metal scrap.

b. Recycling wood waste.

c. Recycling packaging wastes such as paper and cardboard.

d. Collecting non-recyclable waste for transport to a local landfill by a licensed water hauler.

e. Segregating all hazardous 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.

f. Confining concrete delivery truck rinse-out to a designated wash-out area and burying other concrete waste as part of backfilling.

[Final Order V.D.2.1]

6.4. The certificate holder shall install the 34.5-kV collector system underground to the extent practical. The certificate holder shall install underground lines at a minimum depth of three feet. Based on geotechnical conditions or other engineering considerations, the certificate holder may install segments of the collector system aboveground, but the total length of aboveground segments must not exceed five miles.
[Final Order VI.D.2.1]

6.5. In advance of, and during, preparation of detailed design drawings and specifications for the 230-kV and 34.5-kV transmission lines, the certificate holder shall consult with the Utility Safety and Reliability Section of the Oregon Public Utility Commission to ensure that the designs and specifications are consistent with applicable codes and standards.
[Final Order VI.D.2.3]

6.6. 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.
[Final Order on Amendment 2] [Mandatory Condition OAR 345-025-0006 (4)(a)]

6.7. The certificate holder shall consult with the Wasco Electric Cooperative during the design, construction, and operation of the Summit Ridge Wind Farm to ensure that the integrity and reliability of the power grid in Wasco County is maintained.
[Final Order VI.D.2.4]

6.8. The certificate holder shall design and construct the facility in accordance with requirements set forth by the Oregon Building Codes Division and any other applicable codes and design procedures.
[Final Order V.A.2.4]

6.9. To protect wetlands and waterways, the certificate holder shall construct the proposed facility substantially as described in the Final Order. Specifically, the certificate holder shall not remove material from waters of the State or add new fill material to waters of the State such that the total volume of removal and fill exceeds 50 cubic yards for the project as a whole.
[Final Order VI.B.2.1]

6.10. The certificate holder shall design, engineer and construct the facility to avoid dangers to human safety presented by non-seismic hazards. As used in this condition, "non-seismic hazards" include settlement, landslides, flooding and erosion.
[Final Order V.A.2.5]

6.11. The certificate holder shall design, engineer and construct the facility to avoid dangers to human safety presented by seismic hazards affecting the site that are expected to result from all maximum probable seismic events. "Seismic hazard" includes ground shaking, landslide, liquefaction, lateral spreading, tsunami inundation, fault displacement and subsidence.
[Final Order V.A.2.6] [Mandatory Condition OAR 345-025-0006 (12)]

6.12. The certificate holder shall design and construct the facility using the minimum land area necessary for safe construction and operation. The certificate holder shall locate access roads and temporary construction laydown and staging areas to minimize disturbance of farming practices and, wherever feasible, shall place turbines and transmission interconnection lines along the margins of cultivated areas to reduce the potential for conflict with farm operations.
[Final Order IV.D.2.7] [WCLUDO Section 3.210(J)(17)(5)]

6.13. The certificate holder shall notify the Department, the State Building Codes Division and DOGAMI promptly if site investigations or trenching reveal that conditions in the foundation rocks differ significantly from those described in the application for a site certificate. After the Department receives the notice, the Council may require the certificate holder to consult with the DOGAMI and the Building Codes Division and to propose mitigation actions.
[Final Order V.A.2.2] [Mandatory Condition OAR 345-025-0006 (13)]

6.14. The certificate holder shall notify the Department, the State Building Codes Division and DOGAMI promptly if shear zones, artesian aquifers, deformations or clastic dikes are found at or in the vicinity of the site.
[Final Order V.A.2.3] [Mandatory Condition OAR 345-025-0006 (14)]

6.15. To reduce the visual impact of the facility, the certificate holder shall:
a. Mount nacelles on smooth, steel structures, painted uniformly in a low-reflectivity, neutral gray, white, or off-white color.
b. Paint the substation structures in a low-reflectivity neutral color to blend with the 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 urban reserves (as measured from the centerline of the turbine to the edge of the property boundary zoned for non-resource purposes, e.g. rural residential).
[Final Order on Amendment 2]

6.29. The certificate holder must maintain all access roads for all-weather use to assure adequate, safe and efficient emergency vehicle and maintenance vehicle access to the site.
[Amended Final Order on Amendment 1 V.C.2.18]

6.30. The certificate holder shall submit a legal description of the site to the Wasco County GIS Department upon the beginning operation of the facility. This information shall

include the actual latitude and longitude or Oregon State Plane North American Datum 1983 (NAD83) High Accuracy Reference Network (HARN) coordinates of each turbine tower, support structures for the 34.5-kV collector lines and 230-kV transmission line, and other related and supporting facilities. The certificate holder may provide the information in a GIS layer based on the geospatial data that includes all characteristics of spatial features of the facility site boundary. The certificate holder shall confer with the Department prior to submittal of GIS-based information.
[Amended Final Order on Amendment 1 IV.D.2.11]

6.31. During facility construction and operation, the certificate holder shall report to the Department, within 7 days, any change in the corporate structure of Pattern Renewables 2 LP, Pattern Energy Group 2 LP (the sole limited partner), and Pattern Energy Group LP. The certificate holder shall report promptly to the Department any change in its access to the resources, expertise, and personnel of Pattern Renewables 2 LP, Pattern Energy Group 2 LP (the sole limited partner), and Pattern Energy Group LP.
[Final Order on Amendment 3]

6.32 During facility design and construction, the certificate holder shall ensure that the foundations of the turbines, substation, and operations and maintenance building are set back a minimum of 100 feet from any waterbodies designated as fish-bearing, 50 feet from any waterbodies designated as non-fish bearing, and 25 feet from all waterbodies (seasonal or permanent) not identified on any federal, state, or local inventory.
[Final Order on Amendment 2]

6.33 During facility design and construction, the certificate holder shall ensure that facility components are not developed within the Environmental Protection District 4 as designated by Wasco County.
[Final Order on Amendment 2]

6.34 During facility design and construction, the certificate holder shall ensure that facility components are sited to avoid direct impacts to wetlands and waterways.
[Final Order on Amendment 2]

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.
[Final Order IV.K.2.5]

7.5. The certificate holder shall have an operational safety-monitoring program and shall inspect all turbine and turbine tower components on a regular basis. The certificate holder shall maintain or repair turbine and turbine tower components as necessary to protect public safety.
[Final Order IV.K.2.6]

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 assurance that all fences, gates, cattle guards, trailers, or other objects or structures of a permanent nature that could become inadvertently charged with electricity are grounded or bonded throughout the life of the line.
[Final Order IV.M.2.2] [Site Specific Condition OAR 345-027-0023(4)]

7.11. A current copy of the electrical protection plan developed in compliance with Condition 7.10 must be available at the O&M building and provided upon request by ODOE staff.
[Final Order IV.M.2.3]

7.12 Prior to construction, the certificate holder shall schedule a time to brief the OPUC Safety, Reliability, and Security Division (Safety) Staff as to how it will comply with OAR Chapter 860, Division 024 during design, construction, operations, and maintenance of the facilities.
[Final Order on Amendment 2]

7.13 During operation, the certificate holder shall:

a. Update the OPUC Safety Staff as to how the operator will comply with OAR Chapter 860, Division 024 on an ongoing basis considering future operations, maintenance, emergency response, and alterations until facility retirement.

b. File the following required information with the Commission:

i. Each person who is subject to the Public Utility Commission's authority under ORS 757.035 and who engages in the operation of an electric power line as described in ORS 757.035 must provide the commission with the following information before January 2 of each even-numbered year:

a. The name and contact information of the person that is responsible for the operation and maintenance of the electric power line, and for ensuring that the electric power line is safe, on an ongoing basis; and

b. The name and contact information of the person who is responsible for responding to conditions that present an imminent threat to the safety of employees, customers and the public.

ii. In the event that the contact information described in subsection (a) of this condition changes or that ownership of the electric power line changes, the person who engages in the operation of the electric power line must notify the commission of the change as soon as practicable, but no later than within 90 days.

iii. If the person described in subsection (a) of this condition is not the public utility, as defined in ORS 757.005, in whose service territory the electric power line is located, the commission shall make the information provided to the commission under subsection (1) of this section available to the public utility in whose service territory the electric power line is located. [2013 c.235 §3]

c. Provide OPUC Safety Staff with:

i. Maps and Drawings of routes and installation of electrical supply lines showing:

- Transmission lines and structures (over 50,000 Volts)
- 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]

8.5. Upon the beginning of operation of the facility, the certificate holder shall provide a site plan to the Columbia Rural Fire District. The certificate holder shall indicate on the site plan the identification number assigned to each turbine and the actual location of all facility structures. The certificate holder shall provide an updated site plan if additional turbines or other structures are later added to the facility. During operation, the certificate holder shall ensure that appropriate fire protection 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.2.7]

8.6. The certificate holder shall construct turbines and pad-mounted transformers on concrete foundations and shall cover the ground within a 15-foot radius with non-flammable material. The certificate holder shall maintain the non-flammable pad area covering during operation of the facility.
[Final Order V.C.2.8]

8.7. During construction and operation of the facility, the certificate holder shall ensure that the O&M building and all service vehicles are equipped with shovels and portable fire extinguishers of a 4A5OBC or equivalent rating.
[Final Order V.C.2.9]

8.8. During construction, the certificate holder shall ensure that construction vehicles and equipment are operated on graveled areas to the extent possible and that open flames, such as cutting torches, are kept away from dry grass areas.
[Final Order V.C.2.10]

8.9. During operation, the certificate holder shall ensure that all on-site employees receive annual fire prevention and response training by qualified instructors or members of the local fire districts. The certificate holder shall ensure that all employees are instructed to keep vehicles on roads and off dry grassland, except when off-road operation is required for emergency purposes.
[Final Order V.C.2.11]

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)]

9.7. During operation of the facility, the certificate holder shall restore areas that are temporarily disturbed during facility maintenance or repair activities using the same methods and monitoring procedures described in the Revegetation and Weed Control Plan.
[Final Order IV.C.2.7]

9.8. During facility operation, the certificate holder shall routinely inspect and maintain all transmission line corridors, roads, pads and trenched areas and, as necessary, maintain or repair erosion and sediment control measures and control the introduction and spread of noxious weeds.
[Final Order IV.C.2.8]

10.0. PROTECTION OF NATURAL RESOURCES

10.1. Before beginning construction, the certificate holder shall provide to the Department, to the Oregon Department of Fish and Wildlife (ODFW) and to the Planning Director of Wasco County detailed maps of the facility site, showing the final locations where the certificate holder proposes to build facility components, and a table showing the acres of temporary habitat impact by habitat category and subtype and the acres of permanent habitat impact by habitat category and subtype. The detailed maps of the facility site shall indicate the habitat categories of all areas that would be affected during construction. In classifying the affected habitat into habitat categories, the certificate holder shall consult with ODFW. The certificate holder shall not begin ground disturbance in an affected area until the habitat assessment has been approved by the Department. The Department may employ a qualified contractor to confirm the habitat assessment by on-site inspection.
[Final Order IV.G.2.1]

10.2. The certificate holder shall incorporate the design elements listed below into the final facility design to avoid or mitigate impacts to sensitive wildlife habitat:
a. Where practicable, facility components and construction areas shall be located to avoid or minimize temporary and permanent impacts to high quality native habitat and to retain habitat cover in the general landscape.
b. No facility components may be constructed within areas of Category 1 habitat and temporary disturbance of Category 1 habitat shall be avoided.
c. The design of the facility and areas of temporary and permanent disturbance shall avoid impacts to any Category 1 habitat, to any State-listed threatened or endangered plant or wildlife species, and to any State Candidate plant species.
[Final Order IV.G.2.2]

10.3. The certificate holder shall implement measures to avoid or mitigate impacts to sensitive wildlife habitat during construction including, but not limited to, the following:
a. Preparing and distributing maps to employees and contractors to show areas that are off-limits to construction personnel, such as nesting or denning areas for sensitive wildlife species;
b. Avoiding unnecessary road construction, temporary disturbance and vehicle use;
c. Limiting construction work to approved and surveyed areas shown on facility constraint maps; and
d. Ensuring that all construction personnel are instructed to avoid driving cross- country or taking short-cuts within the site boundary or otherwise disturbing areas outside of the approved and surveyed construction areas.
[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. 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,
e. 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]

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 #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.
[Final Order on Amendment 2]

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 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 plant and wildlife investigation of all areas that would be disturbed during construction that lie outside of the previously surveyed areas. The pre-construction survey shall be planned in consultation with the Department and ODFW, and survey protocols shall be confirmed with the Department and ODFW. Following completion of the field survey, and final layout design and engineering, the certificate holder shall provide the Department and ODFW a report containing the results of the survey, showing expected final location of all facility components, the habitat categories of all areas that will be affected by facility components, and the locations of any sensitive resources. The report shall present in tabular format the acres of expected temporary and permanent impacts to each habitat category, type, and sub-type. The pre-construction survey shall be used to complete final design, facility layout, and micrositing of facility components. As part of the report, the certificate holder shall include its impact assessment methodology and calculations, including assumed temporary and permanent impact acreage for each transmission structure, wind turbine, access road, and all other facility components. If construction laydown yards are to be retained post construction, due to a landowner request or otherwise, the construction laydown yards must be calculated as permanent impacts, not temporary.
[Final Order on Amendment 2]

10.8. The certificate holder shall reduce the risk of injuries to avian species by:
a. Installing turbine towers that are smooth steel structures that lack features that would allow avian perching.
b. Installing meteorological towers that are non-guyed structures to eliminate the risk of avian collision with guy-wires.
c. Designing and installing all aboveground transmission line support structures following the most current suggested practices for avian protection on power lines published by the Avian Power Line Interaction Committee.
[Final Order IV.H.2.1]

10.9. 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 gallons of water per day from the on-site well. 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]

10.10. During facility operation, if equipment washing becomes necessary, the certificate holder shall ensure that there is no runoff of wash water from the site or discharges to surface waters, storm sewers or dry wells. The certificate holder shall not use acids, bases or metal brighteners with the wash water. The certificate holder may use biodegradable, phosphate-free cleaners sparingly.
[Final Order VI.C.2.2]

10.11. The certificate holder shall implement a waste management plan during operation that includes but is not limited to the following measures:
a. Training employees to minimize and recycle solid waste.
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.
[Amended Final Order on Amendment 1 IV.G.2.2]

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 B to the First Amended Site Certificate. 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 IV.G.2.8]

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]

11.0. PROTECTION OF HISTORIC, CULTURAL AND ARCHAEOLOGICAL RESOURCES

11.1. Before beginning construction, the certificate holder shall label all identified historic, cultural or archaeological resource sites on construction maps and drawings as "no entry" areas. The applicant shall implement a 200 foot buffer for al rock alignment and cairn sites, and shall implement a 100 foot buffer for all other archaeological sites. The certificate holder may use existing private roads within the buffer areas but may not widen or improve private roads within the buffer areas. The no-entry restriction does not apply to public road rights-of-way within the buffer areas.
[Final Order Section V.B.2.1]

11.2. Before beginning construction, the certificate holder shall provide to the Department a map showing the final design locations of all components of the facility, the areas that would be temporarily disturbed during construction and the areas that were previously surveyed as described in the Application for Site Certificate.
[Final Order V.B.2.2]

11.3. The certificate holder shall hire qualified personnel to conduct field investigation of all areas to be disturbed during construction that lie outside the previously-surveyed areas. The certificate holder shall provide a written report of the field investigation to the Department and to the Oregon State Historic Preservation Office (SHPO). If any potentially significant historic, cultural or archaeological resource sites are found during the field investigation, the certificate holder shall instruct all construction personnel to avoid the identified sites and shall implement appropriate measures to protect the sites, including the measures described in Condition 11.5 and in accordance with the Archaeological Monitoring Plan required per Condition 11.6.
[Final Order V.B.2.3]

11.4. The certificate holder shall ensure that a qualified archaeologist, as defined in OAR 736-051-0070, instructs construction personnel in the identification of cultural materials and avoidance of accidental damage to identified resource sites. Records of such training shall be maintained at the Operations and Maintenance Building and made available to authorized representatives of the Oregon Department of Energy upon request.
[Final Order V.B.2.4]

11.5. The certificate holder shall ensure that construction personnel cease all ground-disturbing activities in the immediate area if any archaeological or cultural resources are found during construction of the facility until a qualified archeologist can evaluate the significance of the find. The certificate holder shall notify the Department and SHPO of the find. If the SHPO determines that the resource is significant, the certificate holder shall make recommendations to the Council for mitigation, including avoidance, field documentation and data recovery, in consultation with the Department, SHPO, interested tribes and other appropriate parties. The certificate holder shall not restart work in the affected area until the certificate holder has demonstrated to the Department and the SHPO that it has complied with archaeological resource protection regulations. [Final Order V.B.2.5]

11.6. The certificate holder shall prepare and implement an Archaeological Monitoring Plan for construction and maintenance activities to address and mitigate impacts from exposure of unanticipated or previously unidentified cultural properties that may be exposed during construction or operation of the facility. A current copy of the plan must be maintained at the Operations and Maintenance Building and made available to authorized representatives of the Oregon Department of Energy upon request. [Final Order V.B.2.6]

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]

12.3. During operation, the certificate holder shall maintain a complaint response system to address noise complaints. The certificate holder shall notify the Department within 15 days of receiving a complaint about noise from the facility. The notification should include, but is not limited to, the date the complaint was received, the nature of the complaint, the complainant's contact information, the location of the affected property, and any actions taken, or planned to be taken, by the certificate holder to address the complaint.
[Final Order VI.A.2.3]

12.4. 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 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.
[Final Order VI.A.2.4]

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:

a. 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.

b. 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.

c. 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.

d. 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 million (in 3rd Quarter 2010 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. 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 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 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 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] [Mandatory Condition OAR 345-025-0006 (8)]

14.2. If the certificate holder elects to use a bond to meet the requirements of Condition 14.1, the certificate holder shall ensure that the surety is obligated to comply with the requirements of applicable statutes, Council rules and this site certificate when the surety exercises any legal or contractual right it may have to assume construction, operation or retirement of the energy facility. The certificate holder shall also ensure that the surety is obligated to notify the Council that it is exercising such rights and to obtain any Council approvals required by applicable statutes, Council rules and this site certificate before the surety commences any activity to complete construction, operate or retire the energy facility.
[Final Order IV.F.2.2]

14.3. The certificate holder shall prevent the development of any conditions on the site that would preclude restoration of the site to a useful, non-hazardous condition to the extent that prevention of such site conditions is within the control of the certificate holder.
[Final Order IV.F.2.3] [Mandatory Condition OAR 345-025-0006 (7)]

14.4. The certificate holder must retire the facility in accordance with a retirement plan approved by the Council if the certificate holder permanently ceases construction or operation of the facility. The retirement plan must describe the activities necessary to restore the site to a useful, non-hazardous condition, as described in OAR 345-027-0110(5). After Council approval of the plan, the certificate holder must obtain the necessary authorization from the appropriate regulatory agencies to proceed with restoration of the site.
[Final Order IV.F.2.4] [Mandatory Condition OAR 345-025-0006 (9)]

14.5. The certificate holder is obligated to retire the facility upon permanent cessation of construction or operation. If the Council finds that the certificate holder has permanently ceased construction or operation of the facility without retiring the facility according to a final retirement plan approved by the Council, as described in OAR 345-027-0110, the Council shall notify the certificate holder and request that the certificate holder submit a proposed final retirement plan to the Department within a reasonable time not to exceed 90 days. If the certificate holder does not submit a proposed final retirement plan by the specified date, the Council may direct the Department to prepare a proposed final retirement plan for the Council's approval.
[Final Order IV.F.2.5] [Mandatory Condition OAR 345-025-0006 (16)]

14.6. Upon the Council's approval of the final retirement plan, the Council may draw on the bond or letter of credit submitted per the requirements of Condition 6.1 to restore the site to a useful, non-hazardous condition according to the final retirement plan, in addition to any penalties the Council may impose under OAR Chapter 345, Division 29. If the amount of the bond or letter of credit is insufficient to pay the actual cost of retirement, the certificate holder shall pay any additional cost necessary to restore the site to a useful, non-hazardous condition. After completion of site restoration, the Council shall issue an order to terminate the site certificate if the Council finds that the facility has been retired according to the approved final retirement plan.
[Final Order IV.F.2.6] [Mandatory Condition OAR 345-025-0006 (16)]

14.7. Following receipt of the site certificate or an amended site certificate, the certificate holder shall implement a plan 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 and maintain it for inspection by the Department or the Council.
[Final Order VII.3] [OAR 345-026-0048]

15.0. SUCCESSORS AND ASSIGNS

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

16.0. SEVERABILITY AND CONSTRUCTION

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

17.0. GOVERNING LAW AND FORUM

This amended site certificate shall be governed by the laws of the State of Oregon. Any litigation or arbitration arising out of this agreement shall be conducted in an appropriate forum in Oregon.

18.0. EXECUTION

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

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

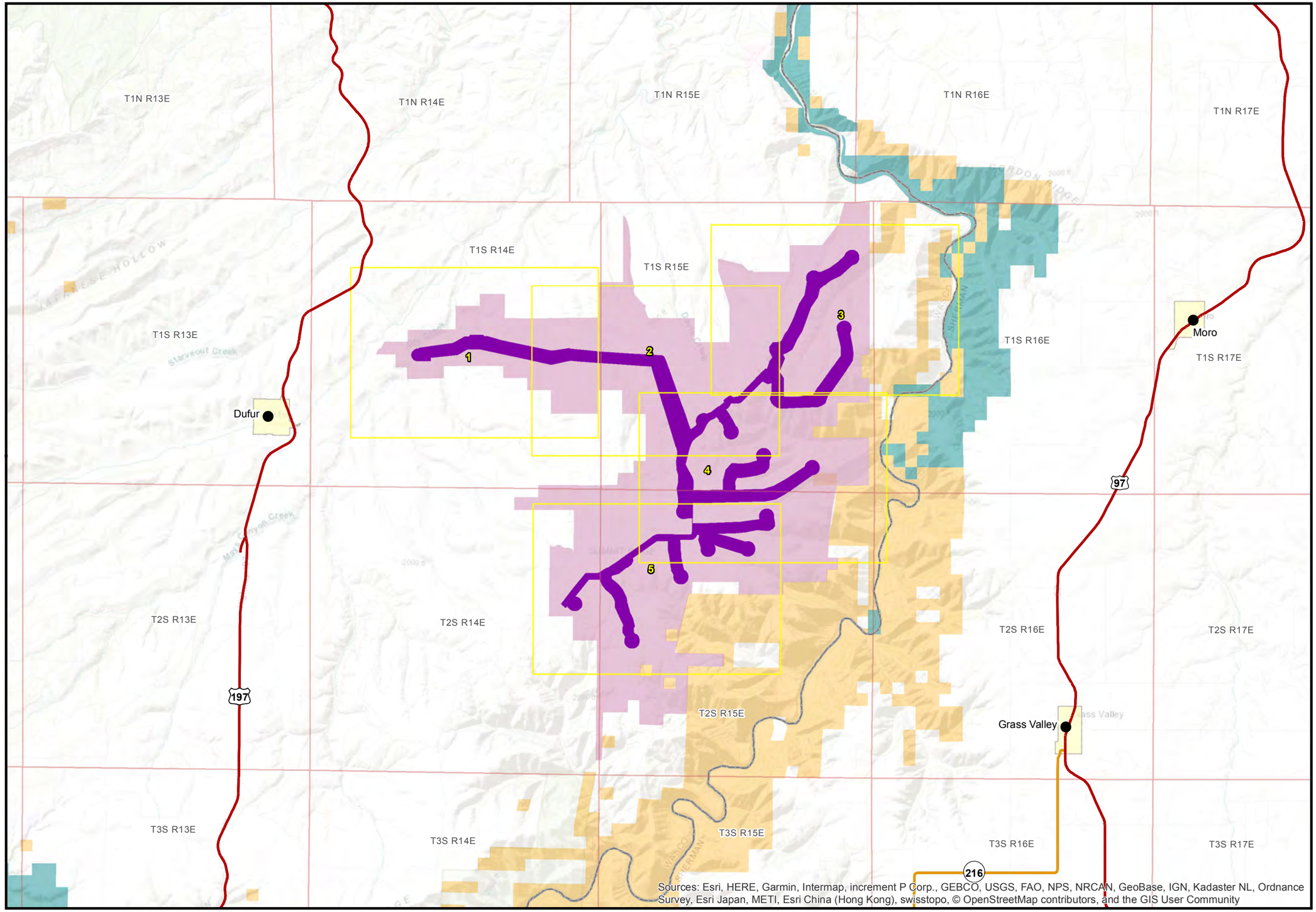
ENERGY FACILITY SITING COUNCIL	Summit Ridge Wind, LLC
By: _____	By: _____
Barry Beyeler, Chair	_____ [Print Name]
Oregon Energy Facility Siting Council	Summit Ridge Wind, LLC
Date: _____	Date: _____

Attachment 2. Updated Property Owner List and Tax Lot Map

Updated List of Property Owners within 500 Feet of Site Boundary

MapTaxlot	First Name	Last Name	Mailing Address	City	State	Zip
1S 14E 0 2300	CARLETON & PAMELA R	CLAUSEN	1816 LIBERTY WAY	THE DALLES	Oregon	97058
1S 14E 0 2600	MERRIL M FAMILY TRUST	ADKISSON	1000 VEY WAY #150	THE DALLES	Oregon	97058
1S 14E 0 2700	JOHN F & PATRICIA R	CLAUSEN	83417 DUFUR VALLEY RD	DUFUR	Oregon	97021
1S 14E 0 2900	MERRIL M FAMILY TRUST	ADKISSON	1000 VEY WAY #150	THE DALLES	Oregon	97058
1S 14E 0 3900	CARLETON & PAMELA	CLAUSEN	1816 LIBERTY WAY	THE DALLES	Oregon	97058
1S 15E 0 100 A01	MICHAEL K	KORTGE	5663 MILL CREEK RD	THE DALLES	Oregon	97058
1S 15E 0 1400	K C	KORTGE	1820 LIBERTY WAY	THE DALLES	Oregon	97058
1S 15E 0 1600 U01	ORMAN GARY R	VAN	6857 ROBERTS MARKET RD	THE DALLES	Oregon	97058
1S 15E 0 1700	WILLIAM E	HAMMEL	7075 FIFTEEN MILE RD	THE DALLES	Oregon	97058
1S 15E 0 1800	WILLIAM E	HAMMEL	7075 FIFTEEN MILE RD	THE DALLES	Oregon	97058
1S 15E 0 2000	RANCHES LLC	KORTGE	5215 EMERSON LOOP RD	THE DALLES	Oregon	97058
1S 15E 0 2100	CARLETON & PAMELA	CLAUSEN	1816 LIBERTY WAY	THE DALLES	Oregon	97058
1S 15E 0 2200	CARLETON & PAMELA	CLAUSEN	1816 LIBERTY WAY	THE DALLES	Oregon	97058
1S 15E 0 2400	KIERAN & RITA LLC	KELLY	2857 NE HAMBLET ST	PORTLAND	Oregon	97212-1657
1S 15E 0 2500	DAWN A RLT	KELLY	560 NINA LANE	HOOD RIVER	Oregon	97031
1S 15E 0 2600	JOHN F ET AL	CLAUSEN	83417 DUFUR VALLEY RD	DUFUR	Oregon	97021
1S 15E 0 2601	CARLETON L & PAMELA R	CLAUSEN	1816 LIBERTY WAY	THE DALLES	Oregon	97058
1S 15E 0 3000	JOHN F & PATRICIA R	CLAUSEN	83417 DUFUR VALLEY RD	DUFUR	Oregon	97021
1S 15E 0 3100	JOHN F & PATRICIA R	CLAUSEN	83417 DUFUR VALLEY RD	DUFUR	Oregon	97021
1S 15E 0 3200	JOHN F ET AL	CLAUSEN	83417 DUFUR VALLEY RD	DUFUR	Oregon	97021
1S 15E 0 3400	STATES OF AMERICA	UNITED	3050 NE 3RD ST	PRINEVILLE	Oregon	97754
1S 15E 0 3500	ROBERT	HAMMEL	62250 TYGH RIDGE RD	DUFUR	Oregon	97021
1S 15E 0 3600	JOHN F	CLAUSEN	83417 DUFUR VALLEY RD	DUFUR	Oregon	97021
1S 15E 0 3700	JOHN ET AL	CLAUSEN	83417 DUFUR VALLEY RD	DUFUR	Oregon	97021
1S 15E 0 3800	ROBERT	HAMMEL	62250 TYGH RIDGE RD	DUFUR	Oregon	97021
2S 14E 0 100	MANIGAL JOHN W & MARLENE	MC	63470 CENTER RIDGE RD	DUFUR	Oregon	97021
2S 14E 0 1700	JOHN F & PATRICIA R	CLAUSEN	83417 DUFUR VALLEY RD	DUFUR	Oregon	97021

MapTaxlot	First Name	Last Name	Mailing Address	City	State	Zip
2S 14E 0 1800	CARLETON L & PAMELA R	CLAUSEN	1816 LIBERTY WAY	THE DALLES	Oregon	97058
2S 15E 0 1000	RONA J	FRANK	235 W TIETAN ST	WALLA WALLA	Washington	99362
2S 15E 0 1100	RONA J	FRANK	235 W TIETAN ST	WALLA WALLA	Washington	99362
2S 15E 0 1200	RONA J	FRANK	235 W TIETAN ST	WALLA WALLA	Washington	99362
2S 15E 0 1300	ROBERT	HAMMEL	62250 TYGH RIDGE RD	DUFUR	Oregon	97021
2S 15E 0 1400	RONA J	FRANK	235 W TIETAN ST	WALLA WALLA	Washington	99362
2S 15E 0 1500	WILLIAM E	HAMMEL	7075 FIFTEEN MILE RD	THE DALLES	Oregon	97058
2S 15E 0 200	JOHN F ET AL	CLAUSEN	83417 DUFUR VALLEY RD	DUFUR	Oregon	97021
2S 15E 0 2200	WILLIAM E & BARBARA K	HAMMEL	7075 FIFTEEN MILE RD	THE DALLES	Oregon	97058
2S 15E 0 2300	OF OREGON	STATE	4034 FAIRVIEW INDUSTRIAL DR SE	SALEM	Oregon	97302
2S 15E 0 2600	OF OREGON	STATE	4034 FAIRVIEW INDUSTRIAL DR SE	SALEM	Oregon	97302
2S 15E 0 300	N RANCHES LLC	R	PO BOX 1370	KENWOOD	California	95452
2S 15E 0 400	ROBERT	HAMMEL	62250 TYGH RIDGE RD	DUFUR	Oregon	97021
2S 15E 0 500	JOHN F ET AL	CLAUSEN	83417 DUFUR VALLEY RD	DUFUR	Oregon	97021
2S 15E 0 600	CARLETON L & PAMELA R	CLAUSEN	1816 LIBERTY WAY	THE DALLES	Oregon	97058
2S 15E 0 700	RONA J	FRANK	235 W TIETAN ST	WALLA WALLA	Washington	99362
2S 15E 0 800 A01	JOHN F	CLAUSEN	83417 DUFUR VALLEY RD	DUFUR	Oregon	97021
2S 15E 0 900	MANIGAL JOHN W & MARLENE	MC	63470 CENTER RIDGE RD	DUFUR	Oregon	97021



PATTERN ENERGY

Summit Ridge

Taxlots

All Taxlots Within 500 Feet of Site Boundary

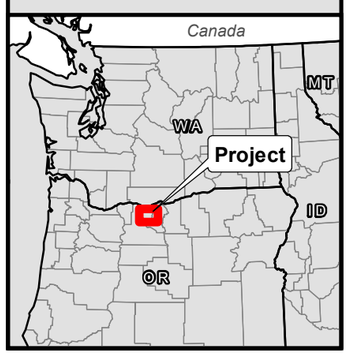
Wasco County, OR

November 2018

- Site Boundary
- Taxlots
- Map Grid
- City/Town
- Interstate Highway
- US Highway
- State Highway
- County Boundary

Land Ownership

- Bureau of Land Management
- Private
- State Lands



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Data Sources ESRI 2007: roads, hydrography / USDA NAIP 2010: air photo / Pattern Energy : project infrastructure

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PATTERN ENERGY
Summit Ridge
Taxlots
All Taxlots Within 500 Feet of Site Boundary
Wasco County, OR
November 2018

- Site Boundary
- Taxlots
- City/Town
- Interstate Highway
- US Highway
- State Highway
- Local Road
- County Boundary

Land Ownership

- Bureau of Land Management
- Private
- State Lands

Pattern Development

TETRA TECH

T1S R14E

1S 14E 0 2700
1S 14E 0 2600
1S 14E 0 2300
1S 14E 0 3900
1S 14E 0 2900

Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community

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Data Sources ESRI 2007: roads, hydrography / USDA NAIP 2010: air photo / Pattern Energy : project infrastructure

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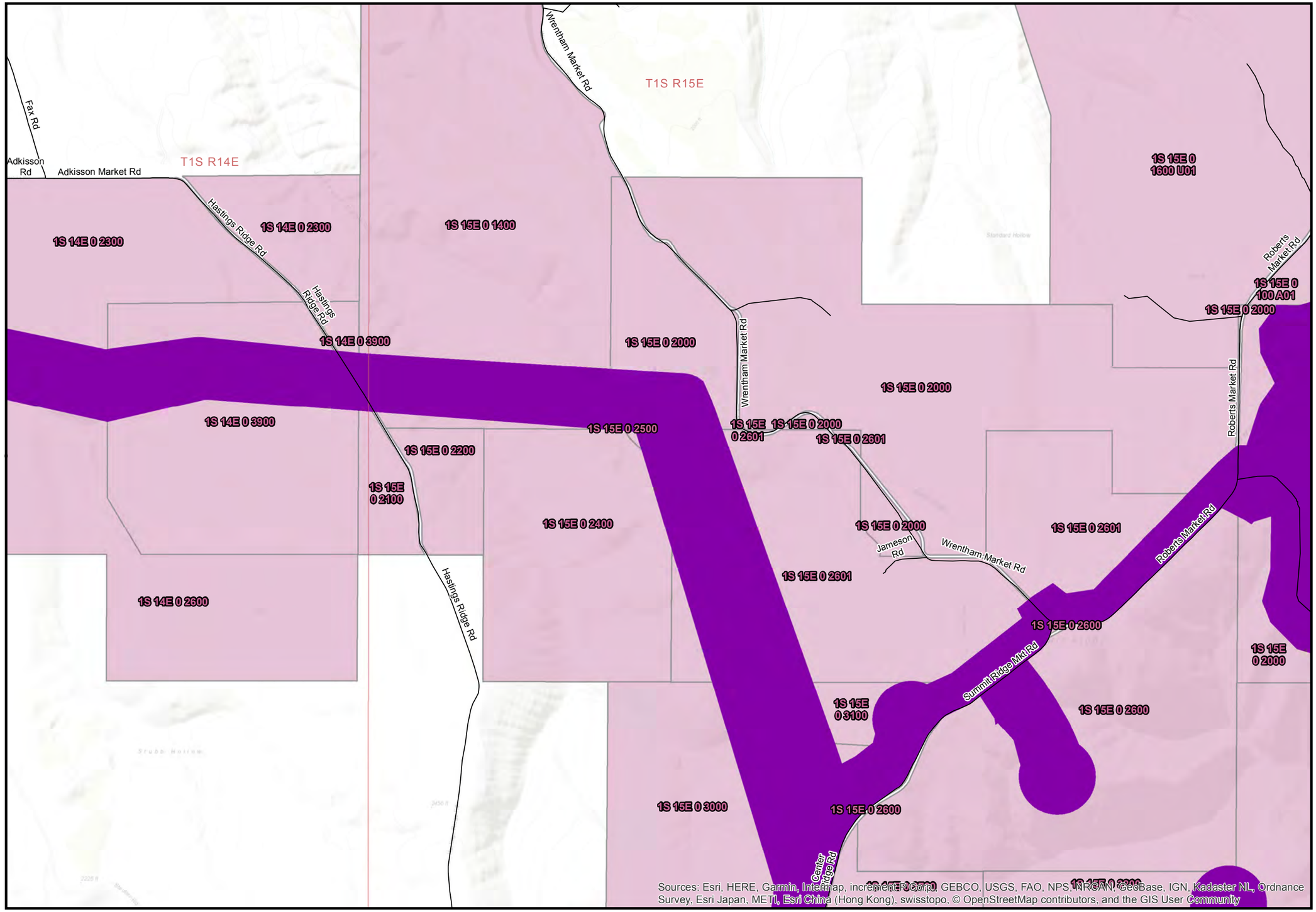

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Summit Ridge

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Wasco County, OR

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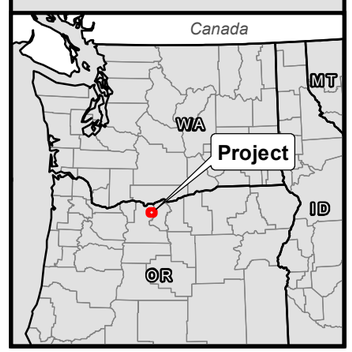

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Data Sources ESRI 2007: roads, hydrography / USDA NAIP 2010: air photo / Pattern Energy : project infrastructure

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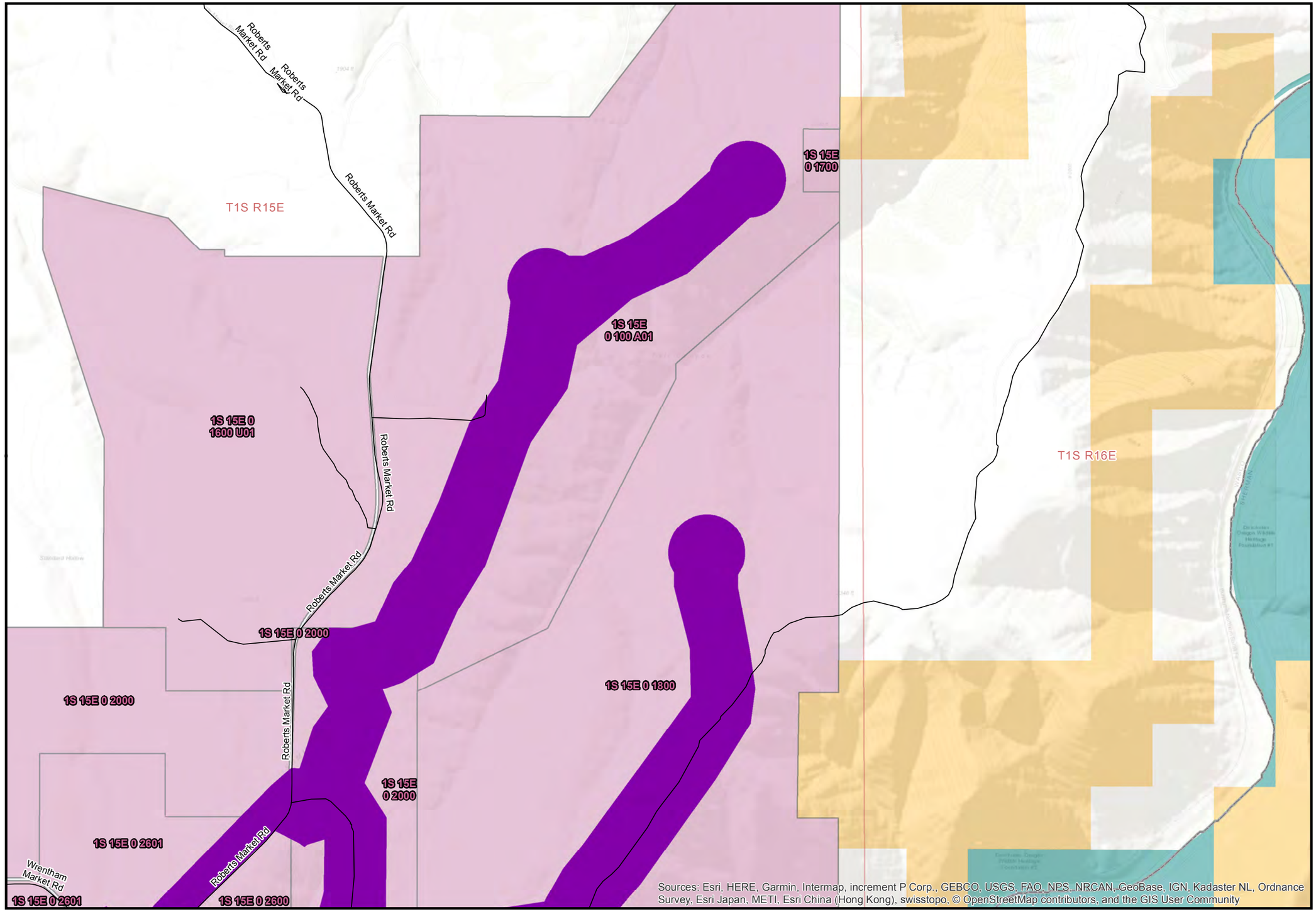

PATTERN ENERGY

Summit Ridge

Taxlots

All Taxlots Within 500 Feet of Site Boundary

Wasco County, OR

November 2018

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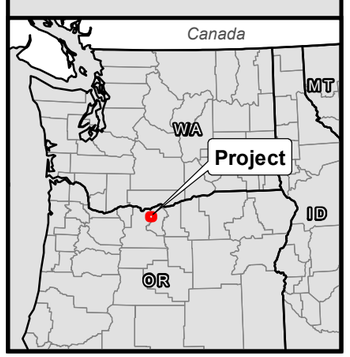

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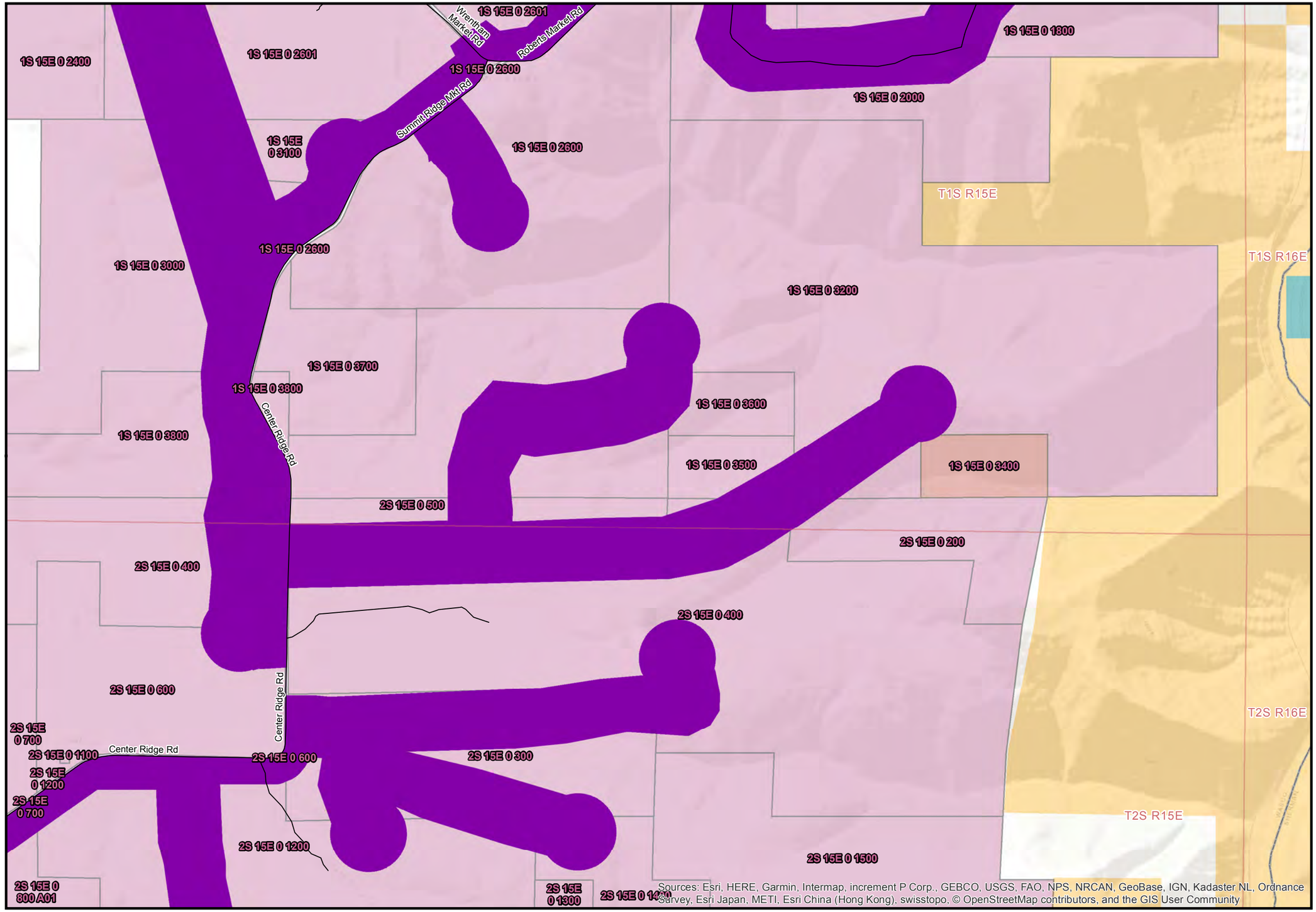

Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community

PATTERN ENERGY

Summit Ridge

Taxlots

All Taxlots Within 500 Feet of Site Boundary

Wasco County, OR

November 2018

- Site Boundary
- Taxlots
- City/Town
- Interstate Highway
- US Highway
- State Highway
- Local Road
- County Boundary

Land Ownership

- Bureau of Land Management
- Private
- State Lands

1:24,000 WGS84 UTM 10

0 0.5 1 1.5 2 Miles

Data Sources ESRI 2007: roads, hydrography / USDA NAIP 2010: air photo / Pattern Energy : project infrastructure

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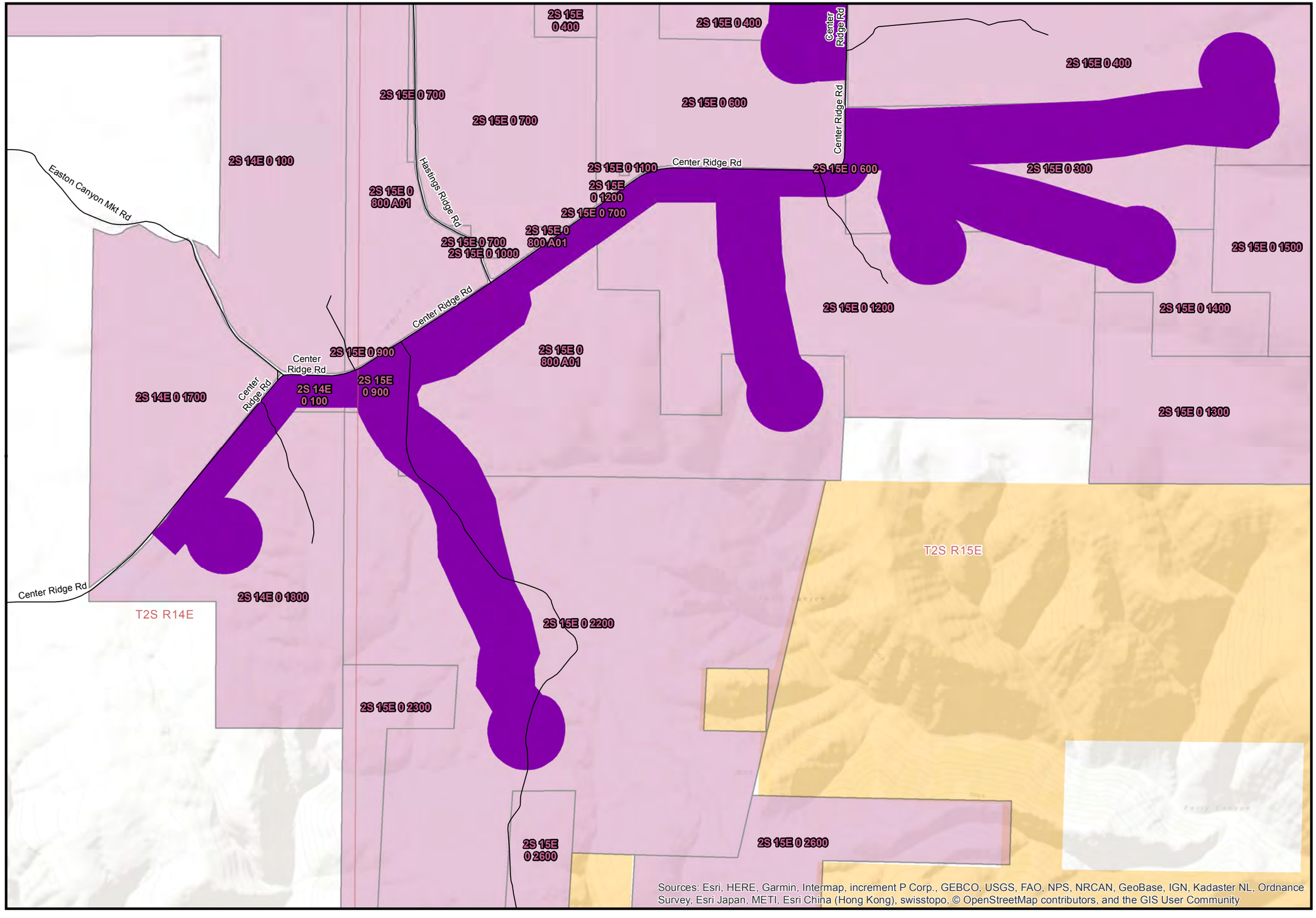

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Attachment 3. Oregon Department of Geology and Mineral Industries (DOGAMI) Consultation Notes

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 micrositing 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.

EXHIBIT D-1

GENERAL DESIGN REQUIREMENTS

Revision History

Rev #	Date	Description	Revision Author	Reviewer
0	**4-2016**	**New Template**	**MT**	**IOU**

EXHIBIT D-1
GENERAL DESIGN REQUIREMENTS

CONTENTS

1 GENERAL DESIGN REQUIREMENTS

1.1 Geotechnical Information

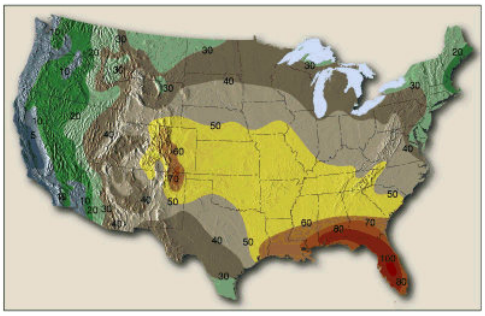
The Geotech Report is attached as Exhibit F-3.

1.2 Weather Data

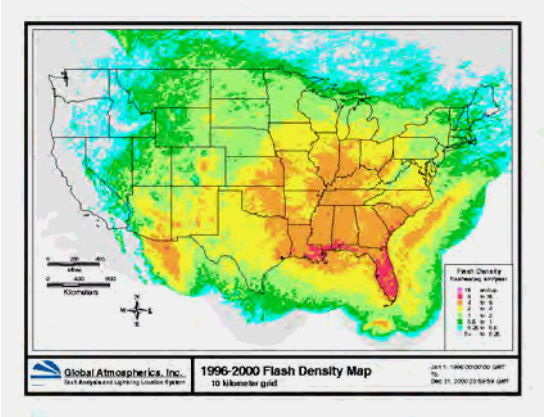
1.2.1 Publically available weather data

The following data is provided from *[location of weather data collection point]* for the Contractor's reference.

- Maximum Temperature (extreme): *[XX ºF]*
- Minimum Temperature (extreme): *[XX ºF]*
- Average Temperature: *[XX ºF]]*
- Average Yearly Precipitation Amount: *[XX inches of rain and snow]*
- Number of days/year > 1 inch/day precipitation, rain and snow: *[X days]*



Annual Thunderstorm Days



1.2.2 On site weather data

The following is provided for reference, based on data collected from on-site temporary meteorological tower(s).

1.2.2.1 Temperature Summary (°C), *[Met tower site number]*.

Year	Mean Temp.	Extreme Maximum	Extreme Minimum
2006	*[XX °F]*	*[XX °F]*	*[XX °F]*
2007	*[XX °F]*	*[XX °F]*	*[XX °F]*
2008	*[XX °F]*	*[XX °F]*	*[XX °F]*
2009	*[XX °F]*	*[XX °F]*	*[XX °F]*
Overall	*[XX °F]*	*[XX °F]*	*[XX °F]*

1.2.2.2 Wind Speeds

The Estimated 50-year return 3-second gust at the Project Site is in the range of [XX-XX mps].

Typical Wind Speeds as Measured by Temporary Meteorological Towers [(Date Range)

[ntd: *Replace Chart 1 with Project-specific table from Met team]*

Chart 1: Percent of total observations for all time periods (24 hours) greater than or equal to **10 m/s**

	CHART 1											
	Month											
Hour	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0	38%	27%	30%	28%	21%	18%	11%	12%	22%	28%	39%	26%
1	32%	28%	30%	25%	24%	22%	7%	8%	17%	31%	39%	26%
2	32%	29%	28%	25%	25%	22%	11%	12%	15%	32%	36%	31%
3	31%	30%	28%	26%	23%	20%	9%	14%	16%	27%	38%	21%
4	34%	32%	26%	30%	26%	19%	9%	11%	17%	26%	35%	21%
5	33%	27%	28%	29%	23%	15%	8%	9%	15%	28%	37%	23%
6	39%	29%	28%	31%	16%	8%	5%	5%	16%	31%	39%	18%
7	35%	31%	24%	21%	12%	8%	5%	4%	12%	31%	36%	17%
8	32%	23%	16%	22%	15%	10%	5%	8%	14%	28%	34%	15%
9	31%	19%	17%	23%	10%	9%	6%	8%	16%	26%	36%	20%
10	28%	21%	17%	25%	11%	8%	2%	8%	15%	30%	34%	19%
11	29%	20%	15%	24%	14%	9%	4%	11%	12%	33%	33%	19%
12	30%	23%	17%	26%	14%	11%	4%	12%	11%	33%	30%	21%
13	29%	21%	17%	22%	13%	8%	7%	14%	16%	37%	32%	22%
14	27%	21%	14%	30%	12%	9%	8%	12%	16%	36%	31%	22%
15	27%	24%	15%	29%	16%	10%	9%	15%	15%	33%	33%	20%
16	30%	25%	17%	31%	17%	13%	10%	15%	16%	31%	33%	24%
17	30%	25%	23%	30%	17%	13%	8%	12%	17%	25%	33%	29%
18	32%	28%	27%	30%	18%	9%	9%	16%	14%	27%	34%	28%
19	36%	29%	23%	27%	19%	13%	9%	15%	17%	29%	34%	26%
20	34%	42%	23%	30%	20%	14%	9%	14%	23%	29%	31%	27%
21	43%	32%	23%	31%	16%	10%	8%	16%	24%	33%	33%	25%
22	37%	34%	26%	29%	20%	14%	15%	13%	28%	30%	34%	28%
23	39%	29%	26%	26%	19%	21%	12%	14%	22%	27%	35%	26%

Notes on typical wind speeds:

- Data is estimated at project hub height using the calculated wind shear at the site
- Data is analyzed on an hourly basis
- Data is provided from the met tower that represents the overall site average and/or the met tower with the most data records
- Data has been quality controlled for erroneous data readings

1.3 Seismic Data

[Site-specific seismic data available from engineering]

1.4 Environmental Plans

Contractor shall develop all environmental plans with respect to the Work consistent with Applicable Laws, Applicable Permits, Applicable Standards, Environmental Assessments and Good Industry Practice, and which shall as appropriate include the following:

- Storm water control and erosion protection
- Waste management (including hazardous wastes)
- Spill prevention, control, and countermeasure
- Wetland protection
- Dust control
- Protection of wildlife and ecology
- Protection of cultural resources

2 APPLICABLE STANDARDS

2.1 General

A partial list of Applicable Standards with respect to the Work is set forth below. Any departure from the Applicable Standards must be fully described in writing and submitted for the Owner's review and approval.

The Owner reserves the right to review and comment on any part of this project. Generally, the Owner will review the design documents as shown in Exhibit L-2. Contractor shall address Owner's comments. Contractor shall provide, at his own cost, any corrections to drawings or construction work in order to comply with applicable codes and standards, or to resolve errors as noted by the Owner.

The design and construction shall meet or exceed the minimum requirements of the applicable sections of the following Applicable Standards in effect at the time of the Agreement.

AAMA	American Aluminum Manufacturers Association
AASHTO	American Association of State and Highway Transportation Officials
ACI	American Concrete Institute
ANSI	American National Standards Institute
ASCE	American Society of Civil Engineers
ASME	American Society of Mechanical Engineers Performance Test Codes

ASTM	American Society for Testing and Materials
AISC	American Institute of Steel Construction
API	American Petroleum Institute
AWS	American Welding Society
AA	Aluminum Association
AEIC	Association of Edison Illuminating Companies
AISI	American Iron and Steel Institute
CRSI	CRSI, Concrete Reinforcing Steel Institute
EEI	Edison Electric Institute
EPA	Environmental Protection Agency
FM	Factory Mutual
IEEE	Institute of Electrical and Electronics Engineers
ICEA	Insulated Cable Engineers Association
IBC	International Building Code
IEC	International Electrotechnical Commission
ISO	International Organization of Standards
IES	Illuminating Engineering Society of North America
TIR	Transmission System Interconnection Requirements
MOT	Ministry of Transportation
NBS	National Bureau Standards
NBFU	National Board of Fire Underwriters
NIST	National Institute of Standards and Technology
NESC	National Electrical Safety Code ANSI/IEEE C2
NEC	National Electrical Code NFPA-70
NEMA	National Electrical Manufacturers Association
NETA	National Electric Testing Association
NFPA	National Fire Protection Association
NRMCA	National Ready Mixed Concrete Association
RCSC	ANSI/AWS D1.1: Structural Connections
UL	Underwriters' Laboratories
UBC / IBS	Uniform Building Code / International Building Code

2.2 Electrical Components

Without limiting references to Applicable Standards elsewhere, the following codes and standards shall apply to the electrical components.

2.2.1 Collection System – E-1

(AEIC) No. CS8, (ICEA) No. S-94-649, (NEMA) No. WC26 (AEIC takes precedence over NEMA) UL 486A- 486B IEEE 404 ANSI C119.4	Collection System (General)
AEIC CS6 (EPR), AEIC CS8 (TRXLPE), AEIC No. S-94-649, ANSI C37.20, C37.35, C37.46, NEMA Standard SG5, any other applicable standards of ANSI, NEMA, (ANSI takes precedence over NEMA) UL44,83, 1072	Cable
ANSI C57.12.28 (enclosure), ANSI C37.20, C37.35, C37.46, NEMA Standard SG5 (ANSI takes precedent over NEMA).	34.5kV Switchgear
ANSI C62	Lightning Arresters
ANSI C29	Insulators
ANSI C76	Apparatus Bushing
ANSI/IEEE C57 series	Power Transformer
ANSI C57.13 and C57.13.6	Instrument Transformer
ANSI C27.12, ANSI C57.12.28, ANSI C57.12.26	Padmount Transformer
IEEE 80, IEEE 81	Grounding and Testing
IEEE 605	Rigid Bus
Avian Power Line Interaction Committee [APLIC]. 2012. "Reducing Avian Collisions with Power Lines: The State of the Art in 2012. Edison Electric Institute and APLIC Washington, D.C. Avian Power Line Interaction Committee [APLIC]. 2006. Suggested Practices for Raptor Protection on Power Lines: The State of the Art in 1996. Edison Electric Institute/Raptor Research Foundation Washington, D.C.	Overhead Pole Line

2.2.2 Substation – E-2

IEEE 605	Rigid Bus
ANSI C2, IEEE Std. 1119, C37.32 and NEC Tables 110-34.	Electrical Clearances
ANSI C37.06, C37.09	HV Circuit Breakers
ANSI C62.11	HV Surge Arrestors
ANSI C37.90, Relays and Relay Systems Associated with Power apparatus, ANSI C37.1, IEEE standard definition, specification, and analysis of systems used for supervisory control, data acquisition, and automatic control ANSI C39.1, Requirements for Indicating Instruments ANSI Z55.1, Gray Finishes for Industrial Apparatus and Equipment IEEE C37.99-2000 Guide for Protection of Shunt Capacitor Banks IEEE 999, IEEE Recommended Practice for Master/Remote Supervisory Control and Data Acquisition Communications	Protection and Control
Impact resistance (ASTM D-2794) 60 direct/60 indirect Pencil hardness (ASTM D-3363) H Flexibility (ASTM D-522) Pass 1/8-inch mandrel Salt spray (ASTM B117-85 [20]) 600 hours Color ANSI 61 gray.	MV Switchgear: Metal-Clad Finish
ANSI/IEEE C37.20.2	Factory Production Tests
IEEE C57.13, C57.13.6	Instrument Transformers
NEMA SG 4	Current Transformer
IEEE Standard 80	Grounding
NFPA 70 and ANSI C2	Lighting
ASCE 7; IEEE 484 and NEC;	Control Building
IEEE 37.99-2000 Guide for Protection of Shunt Capacitor Banks	Capacitor Banks
IEEE 37.109 Guide for Protection of Shunt Reactors	MV Reactor Protection

2.2.3 Transmission Line E-3 - Overhead

ANSI/IEEE C2	National Electrical Safety Code (NESC)
IEEE Standard 524	Guide to the Installation of Overhead Transmission Line Conductors
IEEE Standard 1243-1997	Guide for Improving the Lightning Performance of Transmission Lines
ANSIC29/IEEE 998 IEEE	Guide for Direct Lightning Stroke. Shielding of Substations
ASCE 74	Guidelines for Electrical Transmission Line Structural Loading
ASCE/SEI 48-05	Design Of Steel Transmission Pole Structures
IEEE Std 691, IEEE	Guide for Transmission Structure Foundation Design
Avian Power Line Interaction Committee [APLIC]. 2012.	"Reducing Avian Collisions with Power Lines: The State of the Art in 2012. Edison Electric Institute and APLIC. Washington, D.C.
Avian Power Line Interaction Committee [APLIC]. 2006	Suggested Practices for Raptor Protection on Power Lines: The State of the Art in 1996. Edison Electric Institute/Raptor Research Foundation Washington, D.C.
IEC 62067	Power cables with extruded insulation and their accessories for rated voltages above 150 kV (Um = 170 kV) up to 500 kV (Um = 550 kV) – Test methods and requirements
IEC 60228	Conductors of insulated cables,
ANSI/ICEA S-10-720	Extruded Insulation Power Cables Rated above 46 Through 345 KV
AEIC CS7-93	Specifications for crosslinked polyethylene insulated shielded power cables rated. 69 through 138 kV
IEC: 60840	Power cables with extruded insulation and their accessories for rated voltages above 30 kV (Um = 36 kV) up to 150 kV (Um = 170 kV) - Test methods and requirements
IEC 60229	Electric cables - Tests on extruded oversheaths with a special protective function
IEC 60230	Impulse tests on cables and their accessories
IEC 60270	High-voltage test techniques - Partial discharge measurement

Federal Government requirements for obstruction marking (crossing of bodies of water, structures in vicinity of airports).	Crossings and Obstruction Marking
American Aluminum Manufacturers Association [AAMA]	Aluminum Structures
American Concrete Institute [ACI](American Welding Society "Structural Steel Welding Code" AWS D1.1	Steel Structures

2.2.4 Transmission Line E-3 – Underground

IEC 62067, IEC 60228, ANSI/ICEA S-10-720, AEIC CS7-93,	Manufacturer Standards
IEC 60840, IEC 62067, IEC 60229, IEC 60230, IEC 60270	Testing Standards

2.2.5 E-8 Main Power Transformer

ANSI C57.12.00	Nameplate in accordance with Nameplate C
ANSI C57.115-1991	Guide for loading mineral-oil-immersed power transformer rated in excess of 100MVA
IEEE C57.12.90	Partial discharge requirements
ANSI C57.19.01/ANSI 21-1976/ANSI 24-1984	Bushing requirements
ANSI C57.12.10	Primary and secondary bushing mounting
ANSI C57.19	Bushing cantilever forces
ANSI C57.19	Bushing nameplates

ANSI C57.12.10	Tank grounding pads
ANSI C57.12.00-1987	Noise level measuremenst
EPA publication 49	Oil PCB Testing CFR Part 761, dated May 31, 1979
ANSI C57.12.10	Tank Lifting
ANSI C57.12.10, ANSI C57.131	Load tap changer
ANSI C57.12.10	accessories, alarm circuits
ANSI 362.1	surge arrestors
ANSI C57.12.90 /NEMA/IEEE	testing requirements
ANSI C57.12.00/12.90	short circuit testing

2.2.6 E-9 Padmount Transformer

ANSI	American National Standards Institute
NEMA	American National Standards Institute
NFPA 70	National Electrical Code
IEEE C2	National Electrical Safety Code
ANSI C57.12.00	Evaluated losses tolerance, Table 23
ANSI C57.12.28	Access door bolts
ANSI C57.12.26	Transformer high voltage bushings and parking stands staggered arrangement for loop-feed transformers
C57.12.00	General Requirements for Liquid-Immersed Distribution, Power, and Regulating Transformers
C57.12.34-2009	IEEE Standard Requirements for Pad-Mounted, Compartmental-Type, Self-Cooled, Three-Phase Distribution Transformers, 5 MVA and Smaller; High Voltage, 34.5 kV Nominal System Voltage and Below; Low Voltage, 15 kV Nominal System Voltage & Below
C57.12.70	Terminal Markings and Connections for Distribution and Power Transformers\
C57.12.80	Standard Terminology for Power and Distribution Transformers
C57.12.90	Test Code for Liquid-Immersed Distribution, Power, and Regulating Transformers
C57.12.28	Pad-Mounted Equipment—Enclosure Integrity
IEEE 386	Standard for Separable Insulated Connector Systems for Power Distribution Systems Above 600 V

C57.91	Design Life Loading
C57.12.28	Tamper resistance
C57.12.00	Operating short circuit requirements
C57.12.90	Short circuit test requirements
ASTM D 3487	Insulating Liquid
ASTM D 117	Insulating Liquid testing
ANSI C57.12.26	LV bushings as per figure 7a and 8a
ANSI C57.12.34	tank base skidding / rolling
ANSI C57.12.28	tank coating
NEMA CC-1	tank grounding pads
IEEE C57.12.00	service conditions
ANSI C57.1200	Nameplate, in accordance with Nameplate B
NFPA 70, Article 100	listing and labelling
IEEE C57.12.90	Factory tests

2.3 Civil Works including Concrete and Reinforcing

Without limiting references to Applicable Standards elsewhere, the following codes and standards shall apply to the civil work.

2.3.1 Load Combinations

ASCE 7	Section 1613
IBC	Section 1605

2.3.2 Concrete and Reinforcing

ACI 211.1	Recommended Practice for Selecting Proportions for Normal Weight Concrete
ACI207.1R	Guide to Mass Concrete
ACI 301	Specifications for Structural Concrete for Buildings.
ACI 304	Recommended Practice for Measuring, Mixing, Transporting, and Placing Concrete.
ACI 305	Recommended Practice for Hot Weather Concreting.
ACI 306	Recommended Practice for Cold Weather Concreting.
ACI 315	Recommended Details and Detailing of Concrete Reinforcement
ACI 318	Building Code Requirements for Reinforced Concrete
ACI 336.1	Specification for the Construction of Drilled Piers
ACI 347	Recommended Practice for Concrete Formwork

ASTM A82	Standard Specifications for Cold Drawn Steel Wire for Concrete Reinforcement
ASTM A185	Welded Steel Wire Fabric for Concrete Reinforcement.
ASTM A36	Standard Specification for Structural Steel
ASTM A252	Standard Specification for Welded and Seamless Steel Pile piles
ASTM A615	Deformed and Plain Billet Steel Bars for Concrete Reinforcement
ASTM C31	Practice for Making and Curing Concrete Test Specimens in the Field.
ASTM C33	Concrete Aggregates
ASTM C39	Test Method for Compressive Strength of Cylindrical Concrete Specimens.
ASTM C42	Method of Obtaining and Testing Drilled Cores and Sawed Beams of Concrete.
ASTM C94	Ready-Mixed Concrete
ASTM C143	Test for Slump of Portland Cement Concrete
ASTM C150	Portland Cement
ASTM C171	Sheet Materials for Curing Concrete
ASTM C172	Method of Sampling Fresh Concrete.
ASTM C192	Method of Making and Curing Concrete Test Specimens in the Laboratory
ASTM C231	Test Method for Air Content of Freshly Mixed Concrete by the Pressure Method.
ASTM C260	Air Entraining Admixtures for Concrete.
ASTM C309	Liquid Membrane- Forming Compounds for Curing Concrete
ASTM C494	Chemical Admixtures for Concrete.
ACI 336.1	Specification for the Construction of Drilled Piers
ASTM D1143	Standard Test Method for Piles Under Static Axial Compressive Load
ASTM D3689	Standard Test Method for Piles Under Static Axial Tensile Load
ASTM D3966	Standard Test Method for Piles Under Lateral Load
ASTM D4945	Standard Test Method for High-Strain Dynamic Testing of Piles
ASTM D698	Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort (12400 ft-lbf/ft3 (600 kN-M/M3
ASTM D1557	Test Method for Laboratory Compaction Characteristics of Soil Using Modified Effort (56000 ft-lbf/ft3 (2700 kN-M/M3)

ASTM A53	Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless;
ASTM A123	Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products;
ASTM A307	Standard Specification for Carbon Steel Bolts and Studs (60,000 psi tensile strength);
ASTM A325	Standard Specifications for Structural Bolts, Steel, Heat Treated, 120/105 ksi Minimum Tensile Strength;
ASTM A563	Standard Specification for Carbon and Alloy Steel Nuts;
ASTM A992	Standard Specification for Structural Steel Shapes;
ASTM A1011	Standard Specification for Steel, Sheet and Strip, Hot-Rolled, Carbon, Structural, High-Strength Low-Alloy and High Strength Low-Alloy with improved formability, and Ultra-High Strength;
ASTM C1107	Standard Specification for Packaged Dry, Hydraulic-Cement Grout (Non-shrink);
ASTM F436-09	Standard Specification for Hardened Steel Washers.
ASTM F1554	Standard Specification for anchor bolts 36, 55 and 105 ksi,
CRSI	Manual of Standard Practice.
CRSI	Recommended Practice for Placing Reinforcing Bars.
CRSI	Recommended Practice for Placing Bar Supports, Specifications, and Nomenclature.
CRSI	Recommended Practice for Reinforcing Bar Splices. Post-Tensioning Institutes "Post-Tensioning Manual 6th Edition

2.4 O&M Facility

Without limiting references to Applicable Standards elsewhere, the following codes and standards shall apply to the O&M Facility.

AISC M016, ASTM A 792/ A 792M, AZ 55	Metal Building System - Metal Building Manufacturers Association (MBMA) Low Rise Manual
ASTM A 992 / A 992M, ASTM A 529/ A 529M, ASTM A 572/ A 572M, or ASTM A588/A 588M. Structural tube shall be ASTM A 500 or ASTM B 221.	Framing and structural members shall be steel
ASTM E 96, ASTM E 84, ASTM C 236	Blanket-type fiberglass insulation

ANSI/AAMA/NWWDA 101 SWI SWS, ASCE 7	Windows
ANSI/AAMA/NWWDA 101, AAMA 2605	Aluminum Windows
16 CFR 1201	Wire Glass
SDI 17, ANSI/DHI A115 and ANSI/SDI 100	Service Door Hardware
ANSI A 250	Doors / Frames
NEMA MG 1, NEMA ICS 1, and NEMA ICS 2	Doors electric operators
AAMA 2605, AMCA 500, 500L (wind driven rain), and AMCA 511	Louvres
UFAS and ADA compliant. BHMA A 156.13 for mortise locks	Door Hardware
GA216, GA 224	Gypsum Fasteners
Federal Standard A A 60003, ADA Compliant regulations, FS DD-M-411	Washroom Facilities
Green Seal GS-11, 1993, Green Seal GC-03, 2nd Edition, 1997, SCAQMD Rule 1113, 2004	Paint
CDPH Standard Practice Section 01350	Floor Finish
ASTM # 84, ASTM E 1264, tie wire ASTM A641	Acoustic Ceiling Panels
International Mechanical Code (IMC), International Plumbing Code (IPC), Uniform Plumbing Code (UPC)	Plumbing

2.5 Local Codes and Standards

Without limiting references to Applicable Standards elsewhere, the following local codes and standards shall apply to the Work.

[Project-specific codes and standards, including local building codes, utility codes/requirements, building permits, etc.]

Attachment 4. Summit Ridge and Palm Springs Seismic Hazard Comparison

Comparison of Summit Ridge vs. San Gorgino Pass (near Palm Springs, CA) location - Mountain View IV wind project - 2012 COD

	ASCE 7-10 Results		ASCE 7-16 Results		
	Summit Ridge	Mountain View IV	Summit Ridge	Mountain View IV	
Factor Name	Value		Value		Description
ss	0.455	2.572	0.424	2.311	MCER ground motion (period=0.2s)
s1	0.202	1.267	0.193	0.967	MCER ground motion (period=1.0s)
sms	0.364	2.057	0.339	1.848	Site-modified spectral acceleration value
sm1	0.162	1.014	0.154	0.773	Site-modified spectral acceleration value
sds	0.242	1.372	0.226	1.232	Numeric seismic design value at 0.2s SA
sd1	0.108	0.676	0.103	0.516	Numeric seismic design value at 1.0s SA
sdc	B	E	B	E	Seismic design category
fa	0.8	0.8	0.8	0.8	Site amplification factor at 0.2s
fv	0.8	0.8	0.8	0.8	Site amplification factor at 1.0s
pga	0.188	0.988	0.19	0.994	MCEG peak ground acceleration
fpga	0.8	0.8	0.8	0.8	Site amplification factor at PGA
pgam	0.15	0.79	0.152	0.795	Site modified peak ground acceleration
t-sub-l	16	8	16	8	Long-period transition period (s)
ssrt	0.455	3.025	0.424	2.39	Probabilistic risk-targeted ground motion (0.2s)
ssuh	0.486	3.26	0.469	2.671	Factored uniform-hazard spectral acceleration (2% probability of exceedance in 50 years)
ssd	1.5	2.572	1.5	2.311	Factored deterministic acceleration value (0.2s)
s1rt	0.202	1.308	0.193	0.967	Probabilistic risk-targeted ground motion (1.0s)
s1uh	0.227	1.466	0.218	1.1	Factored uniform-hazard spectral acceleration (2% probability of exceedance in 50 years)
s1d	0.6	1.267	0.6	0.983	Factored deterministic acceleration value (1.0s)
pgad	0.5	0.988	0.5	0.994	Factored deterministic acceleration value (PGA)

source: https://hazards.atcouncil.org

This is a beta release of the new ATC Hazards by Location website. Please contact us with feedback.

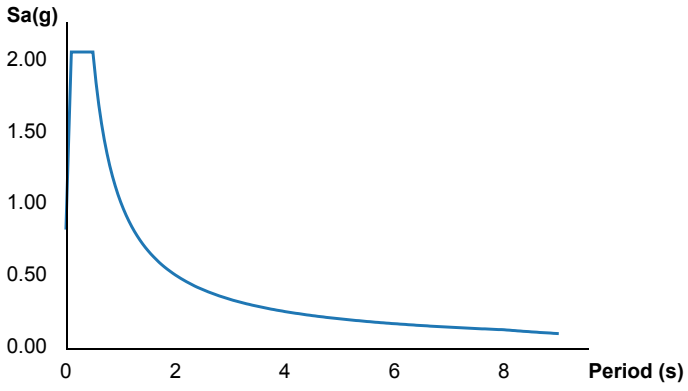
Hazards by Location

Search Information

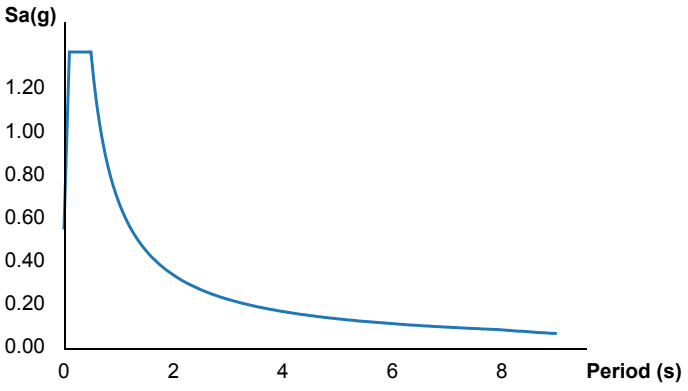
Coordinates:	33.88920558861665, -116.5584937615181
Timestamp:	2019-01-09T19:13:30.285Z
Hazard Type:	Seismic
Reference Document:	ASCE7-10
Risk Category:	I
Site Class:	A
Report Title:	Not specified

Map Results

MCER Horizontal Response Spectrum



Design Horizontal Response Spectrum



Text Results

Basic Parameters

Name	Value	Description
S_S	2.572	MCE_R ground motion (period=0.2s)
S_1	1.267	MCE_R ground motion (period=1.0s)
S_{MS}	2.057	Site-modified spectral acceleration value
S_{M1}	1.014	Site-modified spectral acceleration value
S_{DS}	1.372	Numeric seismic design value at 0.2s SA

⚠ This is a beta release of the new ATC Hazards by Location website. Please contact us with feedback.

Hazards by Location

Search Information

Coordinates:	45.431408824963, -120.91259876861488
Timestamp:	2019-01-09T19:00:54.198Z
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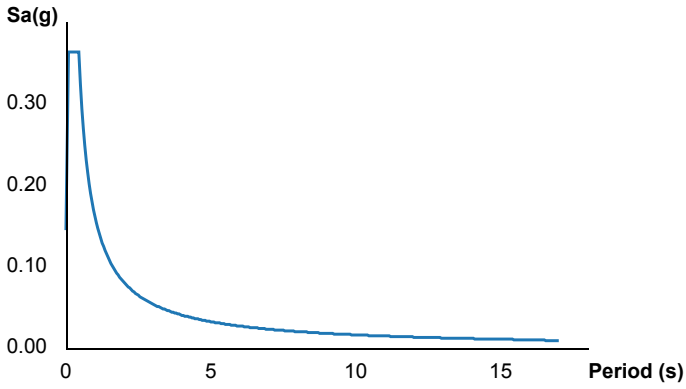
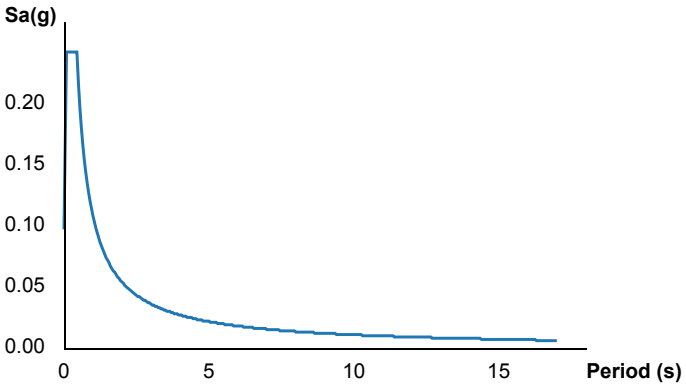
Reference Document:	ASCE7-10
Risk Category:	I
Site Class:	A
Report Title:	Not specified

Map Results

MCER Horizontal Response Spectrum



Design Horizontal Response Spectrum



Text Results

Basic Parameters

Name	Value	Description
S_S	0.455	MCE_R ground motion (period=0.2s)
S_1	0.202	MCE_R ground motion (period=1.0s)
S_{MS}	0.364	Site-modified spectral acceleration value
S_{M1}	0.162	Site-modified spectral acceleration value
S_{DS}	0.242	Numeric seismic design value at 0.2s SA

S_{D1}	0.108	Numeric seismic design value at 1.0s SA

Additional Information

Name	Value	Description
SDC	B	Seismic design category
F_a	0.8	Site amplification factor at 0.2s
F_v	0.8	Site amplification factor at 1.0s
PGA	0.188	MCE_G peak ground acceleration
F_{PGA}	0.8	Site amplification factor at PGA
PGA_M	0.15	Site modified peak ground acceleration
T_L	16	Long-period transition period (s)
SsRT	0.455	Probabilistic risk-targeted ground motion (0.2s)
SsUH	0.486	Factored uniform-hazard spectral acceleration (2% probability of exceedance in 50 years)
SsD	1.5	Factored deterministic acceleration value (0.2s)
S1RT	0.202	Probabilistic risk-targeted ground motion (1.0s)
S1UH	0.227	Factored uniform-hazard spectral acceleration (2% probability of exceedance in 50 years)
S1D	0.6	Factored deterministic acceleration value (1.0s)
PGAd	0.5	Factored deterministic acceleration value (PGA)

The results indicated here DO NOT reflect any state or local amendments to the values or any delineation lines made during the building code adoption process. Users should confirm any output obtained from this tool with the local Authority Having Jurisdiction before proceeding with design.

Disclaimer

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This is a beta release of the new ATC Hazards by Location website. Please contact us with feedback.

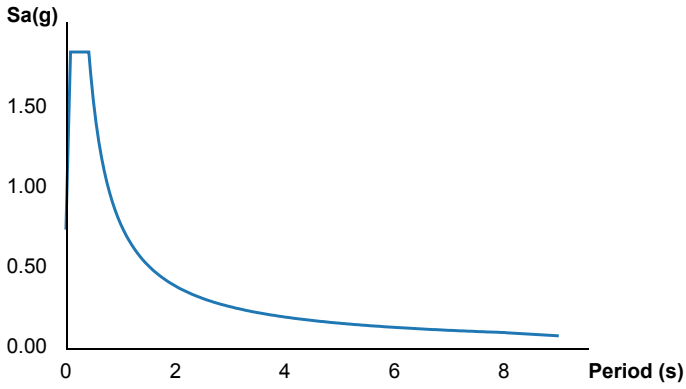
Hazards by Location

Search Information

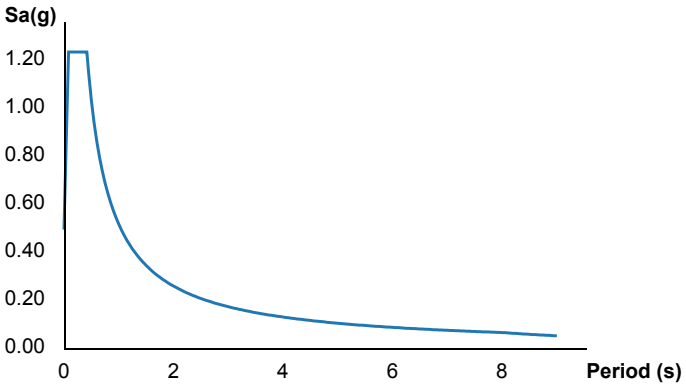
Coordinates:	33.889147481737716, -116.55845436571161
Timestamp:	2019-01-09T18:10:37.759Z
Hazard Type:	Seismic
Reference Document:	ASCE7-16
Risk Category:	I
Site Class:	A
Report Title:	Not specified

Map Results

MCER Horizontal Response Spectrum



Design Horizontal Response Spectrum



Text Results

Basic Parameters

Name	Value	Description
S_S	2.311	MCE_R ground motion (period=0.2s)
S_1	0.967	MCE_R ground motion (period=1.0s)
S_{MS}	1.848	Site-modified spectral acceleration value
S_{M1}	0.773	Site-modified spectral acceleration value
S_{DS}	1.232	Numeric seismic design value at 0.2s SA

S_{D1}	0.516	Numeric seismic design value at 1.0s SA

Additional Information

Name	Value	Description
SDC	E	Seismic design category
F_a	0.8	Site amplification factor at 0.2s
F_v	0.8	Site amplification factor at 1.0s
PGA	0.994	MCE_G peak ground acceleration
F_{PGA}	0.8	Site amplification factor at PGA
PGA_M	0.795	Site modified peak ground acceleration
T_L	8	Long-period transition period (s)
SsRT	2.39	Probabilistic risk-targeted ground motion (0.2s)
SsUH	2.671	Factored uniform-hazard spectral acceleration (2% probability of exceedance in 50 years)
SsD	2.311	Factored deterministic acceleration value (0.2s)
S1RT	0.967	Probabilistic risk-targeted ground motion (1.0s)
S1UH	1.1	Factored uniform-hazard spectral acceleration (2% probability of exceedance in 50 years)
S1D	0.983	Factored deterministic acceleration value (1.0s)
PGAd	0.994	Factored deterministic acceleration value (PGA)

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⚠ This is a beta release of the new ATC Hazards by Location website. Please contact us with feedback.

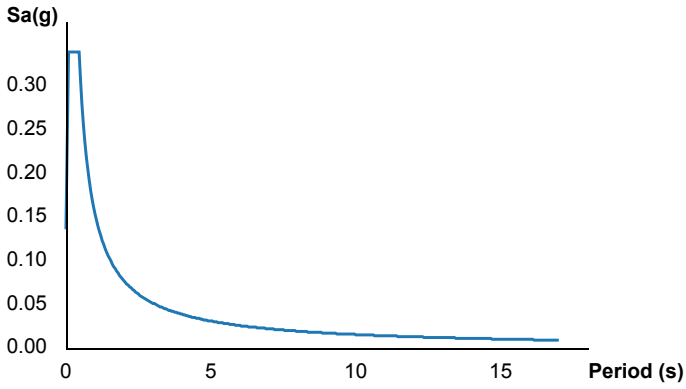
Hazards by Location

Search Information

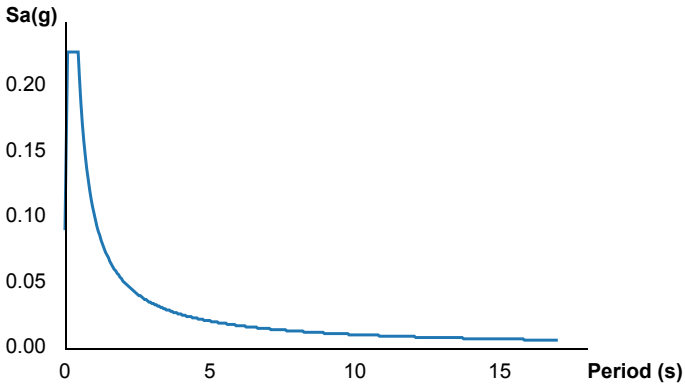
Coordinates:	45.4318911114162, -120.91329670861461
Timestamp:	2019-01-09T18:21:17.368Z
Hazard Type:	Seismic
Reference Document:	ASCE7-16
Risk Category:	I
Site Class:	A
Report Title:	Not specified

Map Results

MCER Horizontal Response Spectrum



Design Horizontal Response Spectrum



Text Results

Basic Parameters

Name	Value	Description
S_S	0.424	MCE_R ground motion (period=0.2s)
S_1	0.193	MCE_R ground motion (period=1.0s)
S_{MS}	0.339	Site-modified spectral acceleration value
S_{M1}	0.154	Site-modified spectral acceleration value
S_{DS}	0.226	Numeric seismic design value at 0.2s SA

S_{D1}	0.103	Numeric seismic design value at 1.0s SA

Additional Information

Name	Value	Description
SDC	B	Seismic design category
F_a	0.8	Site amplification factor at 0.2s
F_v	0.8	Site amplification factor at 1.0s
PGA	0.19	MCE_G peak ground acceleration
F_{PGA}	0.8	Site amplification factor at PGA
PGA_M	0.152	Site modified peak ground acceleration
T_L	16	Long-period transition period (s)
SsRT	0.424	Probabilistic risk-targeted ground motion (0.2s)
SsUH	0.469	Factored uniform-hazard spectral acceleration (2% probability of exceedance in 50 years)
SsD	1.5	Factored deterministic acceleration value (0.2s)
S1RT	0.193	Probabilistic risk-targeted ground motion (1.0s)
S1UH	0.218	Factored uniform-hazard spectral acceleration (2% probability of exceedance in 50 years)
S1D	0.6	Factored deterministic acceleration value (1.0s)
PGAd	0.5	Factored deterministic acceleration value (PGA)

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Disclaimer

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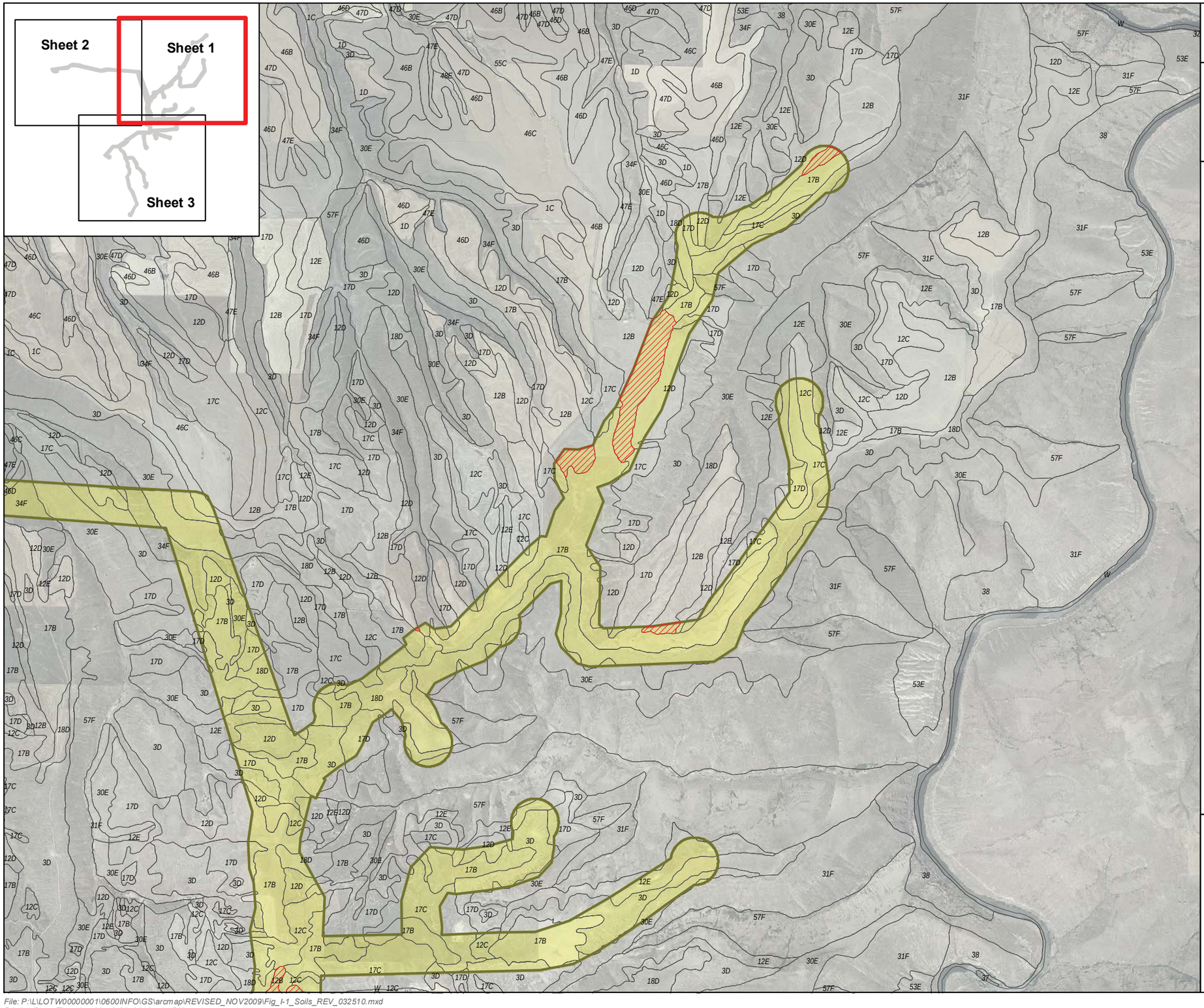
Attachment 5. High-value Farmland



LotusWorks - Summit Ridge I, LLC

Figure I-1
Soil Survey, Sheet 1

Legend

- Site Boundary
- Soil Types
- High Value Soils

Soil Types in Survey Corridors

1C	Anderly silt loam, 7 to 12 pecent slopes
1D	Anderly silt loam, 12 to 20 pecent slopes
2D	Bakeoven very cobbly loam, 2 to 20 percent slopes
3D	Bakeoven-Condon comples, 2 to 20 percent slopes
12B	Cantala silt loam, 1 to 7 percent slopes *
12C	Cantala silt loam, 7 to 12 percent slopes
12D	Cantala silt loam, 12 to 20 percent slopes
12E	Cantala silt loam, 20 to 35 percent slopes
17B	Condon silt loam, 1 to 7 percent slopes
17C	Condon silt loam, 7 to 12 percent slopes
17D	Condon silt loam, 12 to 25 percent slopes
18D	Condon-Bakeoven complex, 2 to 20 percent slopes
26	Hermiston silt loam*
30E	Lickskillet very stony loam, 15 to 40 percent slopes
31F	Lickskillet extremely stony loam, 40 to 70 percent slopes
34F	Nansene silt loam, 35 to 70 percent slopes
37	Riverwash
44	Typh fine sandy loam
46B	Walla Walla silt loam, 3 to 7 percent slopes
46C	Walla Walla silt loam, 7 to 12 percent slopes
46D	Walla Walla silt loam, 12 to 20 percent north slopes
47E	Walla Walla silt loam, 20 to 35 percent north slopes
57F	Wrentham-Rock outcrop complex, 35 to 70 percent slopes

** High Value Soil Types*

N

0 0.5 1 1.5

Miles

Data Sources:

LotusWorks, 2009

Soil Survey Geographic (SSURGO) database for Wasco County, Oregon, Northern Part, 2006

Oregon Imagery Explorer, 2005

LotusWorks Summit Ridge I

File: P:\L\LOTW00000001\0600INFO\GS\arcmap\REVISED_NOV2009\Fig_I-1_Soils_REV_032510.mxd
Printing Date: Thursday, March 25, 2010 4:14 PM

LotusWorks - Summit Ridge I, LLC

Figure I-1
Soil Survey, Sheet 2

Legend

- Site Boundary
- Soil Types
- High Value Soils

Soil Types in Survey Corridors

1C	Anderly silt loam, 7 to 12 pecent slopes
1D	Anderly silt loam, 12 to 20 pecent slopes
2D	Bakeoven very cobbly loam, 2 to 20 percent slopes
3D	Bakeoven-Condon comples, 2 to 20 percent slopes
12B	Cantala silt loam, 1 to 7 percent slopes *
12C	Cantala silt loam, 7 to 12 percent slopes
12D	Cantala silt loam, 12 to 20 percent slopes
12E	Cantala silt loam, 20 to 35 percent slopes
17B	Condon silt loam, 1 to 7 percent slopes
17C	Condon silt loam, 7 to 12 percent slopes
17D	Condon silt loam, 12 to 25 percent slopes
18D	Condon-Bakeoven complex, 2 to 20 percent slopes
26	Hermiston silt loam*
30E	Lickskillet very stony loam, 15 to 40 percent slopes
31F	Lickskillet extremely stony loam, 40 to 70 percent slopes
34F	Nansene silt loam, 35 to 70 percent slopes
37	Riverwash
44	Typh fine sandy loam
46B	Walla Walla silt loam, 3 to 7 percent slopes
46C	Walla Walla silt loam, 7 to 12 percent slopes
46D	Walla Walla silt loam, 12 to 20 percent north slopes
47E	Walla Walla silt loam, 20 to 35 percent north slopes
57F	Wrentham-Rock outcrop complex, 35 to 70 percent slopes

** High Value Soil Types*

N

0 0.5 1 1.5

Miles

Data Sources:

LotusWorks, 2009

Soil Survey Geographic (SSURGO) database for Wasco County, Oregon, Northern Part, 2006

Oregon Imagery Explorer, 2005

LotusWorks Summit Ridge I

File: P:\L\LOTW00000001\0600INFO\GS\arcmap\REVISED_NOV2009\Fig_I-1_Soils_REV_032510.mxd
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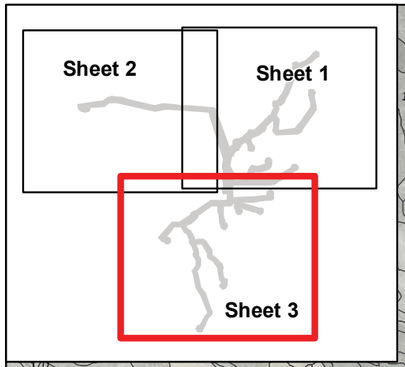

LotusWorks - Summit Ridge I, LLC

Figure I-1
Soil Survey, Sheet 3

Legend

- Site Boundary
- Soil Types
- High Value Soils

Soil Types in Survey Corridors

1C	Anderly silt loam, 7 to 12 pecent slopes
1D	Anderly silt loam, 12 to 20 pecent slopes
2D	Bakeoven very cobbly loam, 2 to 20 percent slopes
3D	Bakeoven-Condon comples, 2 to 20 percent slopes
12B	Cantala silt loam, 1 to 7 percent slopes *
12C	Cantala silt loam, 7 to 12 percent slopes
12D	Cantala silt loam, 12 to 20 percent slopes
12E	Cantala silt loam, 20 to 35 percent slopes
17B	Condon silt loam, 1 to 7 percent slopes
17C	Condon silt loam, 7 to 12 percent slopes
17D	Condon silt loam, 12 to 25 percent slopes
18D	Condon-Bakeoven complex, 2 to 20 percent slopes
26	Hermiston silt loam*
30E	Lickskillet very stony loam, 15 to 40 percent slopes
31F	Lickskillet extremely stony loam, 40 to 70 percent slopes
34F	Nansene silt loam, 35 to 70 percent slopes
37	Riverwash
44	Typh fine sandy loam
46B	Walla Walla silt loam, 3 to 7 percent slopes
46C	Walla Walla silt loam, 7 to 12 percent slopes
46D	Walla Walla silt loam, 12 to 20 percent north slopes
47E	Walla Walla silt loam, 20 to 35 percent north slopes
57F	Wrentham-Rock outcrop complex, 35 to 70 percent slopes

** High Value Soil Types*

N

0 0.5 1 1.5

Miles

Data Sources:

LotusWorks, 2009

Soil Survey Geographic (SSURGO) database for Wasco County, Oregon, Northern Part, 2006

Oregon Imagery Explorer, 2005

LotusWorks Summit Ridge I

File: P:\L\LOTW00000001\0600INFO\GS\arcmap\REVISED_NOV2009\Fig_I-1_Soils_REV_032510.mxd
Printing Date: Thursday, March 25, 2010 4:14 PM

Attachment 6. Decommissioning Cost Estimate

Baseline Unit Cost	UOM	Item Code	Description	Quantity	UOM	Unit Cost	Total	$/KW
			Wind Decom. - BOP & High Voltage Work					
$200,000.00	/ MONTH		Wind Decom. - ENG & MGMT	6.0	MONTH	$125,312.34	$751,874	$3.868
$15.00	/ LF		Wind Decom. - Civil Work	101,400.0	LF	$9.40	$953,000	$4.902
$20,000.00	/ EA		Wind Decom. - Foundation (WTG #1)	64.0	EA	$12,531.23	$801,999	$4.126
$20,000.00	/ EA		Wind Decom. - Foundation (WTG #2)	8.0	EA	$12,531.23	$100,250	$0.516
$50,000.00	/ EA		Wind Decom. - Decommissioning (WTG #1)	64.0	EA	$31,328.08	$2,004,997	$10.314
$50,000.00	/ EA		Wind Decom. - Decommissioning (WTG #2)	8.0	EA	$31,328.08	$250,625	$1.289
$2,500.00	/ EA		Wind Decom. - MV System	72.0	EA	$1,566.40	$112,781	$0.580
$10.00	/ SF		Wind Decom. - OM Building	5,500.0	SF	$6.27	$34,461	$0.177
$15,000.00	/ EA		Wind Decom. - Miscellaneous	2.0	EA	$9,398.43	$18,797	$0.097
$2,000.00	/ MW		Substation Decom.	194.4	MW	$1,253.12	$243,607	$1.253
$95,000.00	/ MILE		T-Line Decom.	7.0	MILE	$59,523.36	$416,664	$2.143
$65,000.00	/ BRKR		Switchyard Decom.	3.0	BRKR	$40,726.51	$122,180	$0.628
						Sub Total	**$5,811,234**	**$29.893**

Baseline Unit Cost	UOM	Item Code	Description	Quantity	UOM	Unit Cost	Total	$/KW
$0.00	/ EA		Wind Decom. - Foundation (WTG #1)	64.0	EA	Incl. in Unit Cost		
$0.00	/ EA		Wind Decom. - Foundation (WTG #2)	8.0	EA	Incl. in Unit Cost		
$750.00	/ mile		Wind Decom. - Decommissioning (WTG #1)	64.0	EA	$47,659.36	$3,050,199	$15.690
$750.00	/ mile		Wind Decom. - Decommissioning (WTG #2)	8.0	EA	$47,659.36	$381,275	$1.961
$0.00	/ EA		Wind Decom. - MV System	72.0	EA	Incl. in Unit Cost		
$0.00	/ SF		Wind Decom. - OM Building	5,500.0	SF	Incl. in Unit Cost		
$0.00	/ EA		Wind Decom. - Miscellaneous	2.0	EA	Incl. in Unit Cost		
$0.00	/ MW		Substation Decom.	194.4	MW	Incl. in Unit Cost		
$0.00	/ EA		Main Power Transformer	2.0	EA	Incl. in Unit Cost		
$0.00	/ MILE		T-Line Decom.	7.0	MILE	Incl. in Unit Cost		
$0.00	/ BRKR		Switchyard Decom.	3.0	BRKR	Incl. in Unit Cost		
						Sub Total	**$3,431,474**	**$17.652**

			Non-Contracted BOP					
$80,000.00	/ MONTH		Non-Contracted BOP	8.0	MONTH	$78,880.00	$631,040	$3.246
						Sub Total	**$631,040**	**$3.246**

TOTAL	**$9,873,748**	**$50.791**
TOTAL COST/ WTG	**$137,135**	

S_{D1}	0.676	Numeric seismic design value at 1.0s SA

Additional Information

Name	Value	Description
SDC	E	Seismic design category
F_a	0.8	Site amplification factor at 0.2s
F_v	0.8	Site amplification factor at 1.0s
PGA	0.988	MCE_G peak ground acceleration
F_{PGA}	0.8	Site amplification factor at PGA
PGA_M	0.79	Site modified peak ground acceleration
T_L	8	Long-period transition period (s)
SsRT	3.025	Probabilistic risk-targeted ground motion (0.2s)
SsUH	3.26	Factored uniform-hazard spectral acceleration (2% probability of exceedance in 50 years)
SsD	2.572	Factored deterministic acceleration value (0.2s)
S1RT	1.308	Probabilistic risk-targeted ground motion (1.0s)
S1UH	1.466	Factored uniform-hazard spectral acceleration (2% probability of exceedance in 50 years)
S1D	1.267	Factored deterministic acceleration value (1.0s)
PGAd	0.988	Factored deterministic acceleration value (PGA)

The results indicated here DO NOT reflect any state or local amendments to the values or any delineation lines made during the building code adoption process. Users should confirm any output obtained from this tool with the local Authority Having Jurisdiction before proceeding with design.

Disclaimer

Hazard loads are provided by the United States Geological Survey Seismic Design Web Services.

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Attachment 7. Updated Service Provider Communications

From: Gulick, Kristen
To: Fossum, Linnea
Subject: FW: Summit Ridge Wind Farm Sheriff Coverage
Date: Tuesday, July 31, 2018 1:44:00 PM
Attachments: SHERIFF - SUMMIT RIDGE.pdf

Linnea – I sent an email just so they could have the correspondence document to reference immediately. I will call public services and the fire/EMS folks tomorrow if I don't hear back today.

Kristen

……

Kristen,

I received your email regarding the Summit Ridge Wind Farm and the letter addressed by former Sheriff Rick Eiesland.

I would agree with the previous sheriff that I don't see any problems with the project.

Sincerely,

--

Lane Magill | ***Wasco County Sheriff***
SHERIFF'S OFFICE

lanem@co.wasco.or.us | www.co.wasco.or.us
541-506-2592 | Fax 541-506-2581
511 Washington St. Suite 102 | The Dalles, OR 97058

From: Gulick, Kristen
Sent: Tuesday, July 31, 2018 1:00 PM
To: 'sheriff@co.wasco.or.us' <sheriff@co.wasco.or.us>
Subject: Summit Ridge Wind Farm Sheriff Coverage

Hello,
I am contacting you on behalf of Summit Ridge Wind Farm.
Correspondence was received from you in 2009 confirming that the Summit Ridge project is within the Wasco County Sheriff Office jurisdiction. At the time, Sheriff Rick Eiesland did not foresee any conflicts or problems that would result from the project being placed on the east side of Wasco County. Please see the attached letter of correspondence.

If you could please confirm that the correspondence agreement is still accurate, that would be greatly appreciated. Another letter can be drafted if you deem it necessary.

Thanks so much,

Kristen Gulick | **Environmental Planner**
Office: 503.721.7216 x 2241
Cell: 541.740.3316
kristen.gulick@tetratech.com

Tetra Tech |
1750 SW Harbor Way, STE 400 | Portland, OR 97201 | www.tetratech.com

From:	Ray Johnson
To:	Gulick, Kristen
Cc:	Fossum, Linnea
Subject:	RE: RESPONSE NEEDED: Summit Ridge Wind Farm Water Use Agreement
Date:	Thursday, August 2, 2018 2:00:46 PM

Response to request for Summit Ridge Wind Farm water use agreement;

This is to verify that the City of The Dalles is still able to provide water service to the Summit Ridge Wind Farm as detailed in the original agreement letter dated 7/22/10 and signed by Ray Johnson, Water Distribution Manager.

The City does not require another letter to be drafted at this time.
Please contact me if you need any additional information.

Ray Johnson

Ray Johnson, *Water Distribution Manager*
Cell: 541-980-7261
Desk: 541-506-2012
rjohnson@ci.the-dalles.or.us

City of The Dalles, Public Works
1215 W 1st St.
The Dalles, OR 97058

From: Gulick, Kristen [mailto:Kristen.Gulick@tetratech.com]
Sent: Wednesday, August 1, 2018 11:30 AM
To: Ray Johnson <rjohnson@ci.the-dalles.or.us>; Joanna Kemper <jkemper@ci.the-dalles.or.us>
Subject: RESPONSE NEEDED: Summit Ridge Wind Farm Water Use Agreement

Hello,
I am contacting you on behalf of Summit Ridge Wind Farm.
Correspondence was received from you in 2010 confirming that the City of the Dalles has the capability and is willing to provide construction water to Lotus Works for the Lotus-Summit Ridge I project. This correspondence occurred during the original project development phase and we are contacting you on behalf of the new owner to verify that you are still able to provide the same

service (assuming mutually agreeable terms can be reached). Please see the attached letter of correspondence.

If you could please confirm that the correspondence agreement is still accurate, that would be greatly appreciated. Another letter can be drafted if you deem it necessary.

Thanks so much,

Kristen Gulick | **Environmental Planner**
Office: 503.721.7216 x 2241
Cell: 541.740.3316
kristen.gulick@tetratech.com

Tetra Tech |
1750 SW Harbor Way, STE 400 | Portland, OR 97201 | www.tetratech.com

From: larry clark
To: Gulick, Kristen
Subject: RE: RESPONSE NEEDED ASAP: Summit Ridge Wind Farm Fire/EMS Agreement
Date: Saturday, October 13, 2018 7:18:46 AM

Yes we would still respond.

From: Gulick, Kristen [mailto:Kristen.Gulick@tetratech.com]
Sent: Thursday, October 11, 2018 1:56 PM
To: dufurfire@ortelco.net; dufurambulance@ortelco.net
Subject: RESPONSE NEEDED ASAP: Summit Ridge Wind Farm Fire/EMS Agreement

Hello,
I am contacting you on behalf of Summit Ridge Wind Farm. I spoke with you a couple months ago when the fire season was in full swing so I wanted to touch base now that things have settled down. Correspondence was received from you in 2009 confirming that the Columbia Rural and Dufur Fire and Ambulance Service would be first to response to related emergencies at the wind project. This correspondence occurred during the original project development phase and we are contacting you on behalf of the new owner to verify that you are still able to provide the same service (assuming mutually agreeable terms can be reached). Please see the attached letter of correspondence.

If you could please confirm that the correspondence agreement is still accurate as soon as possible, that would be greatly appreciated. This is a very quick project turn-around. Another letter can be drafted if you deem it necessary.

Thanks so much,

Thank you!

Kristen Gulick | **Environmental Planner**
Office: 503.721.7216 x 2241
Cell: 541.740.3316
kristen.gulick@tetratech.com

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